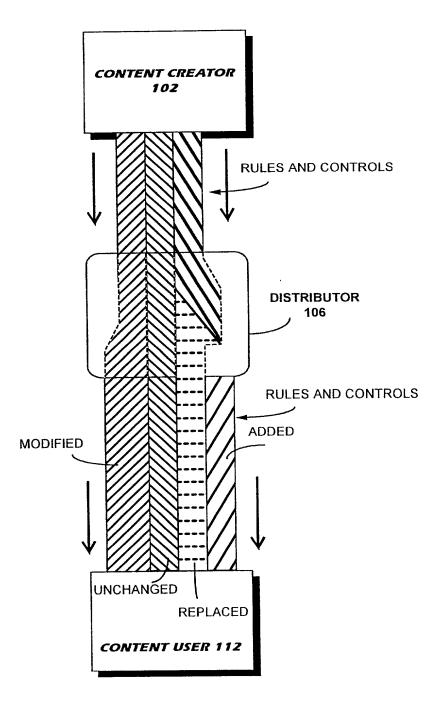
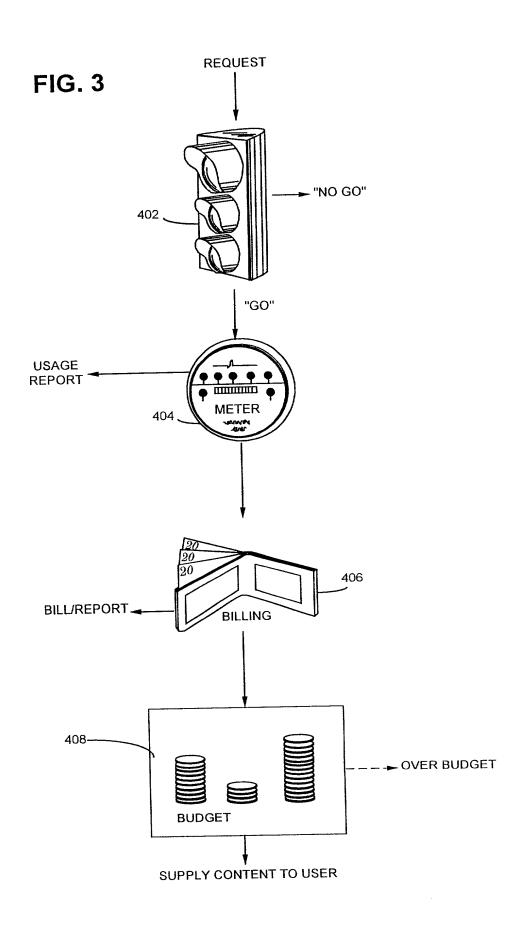


FIG. 2A





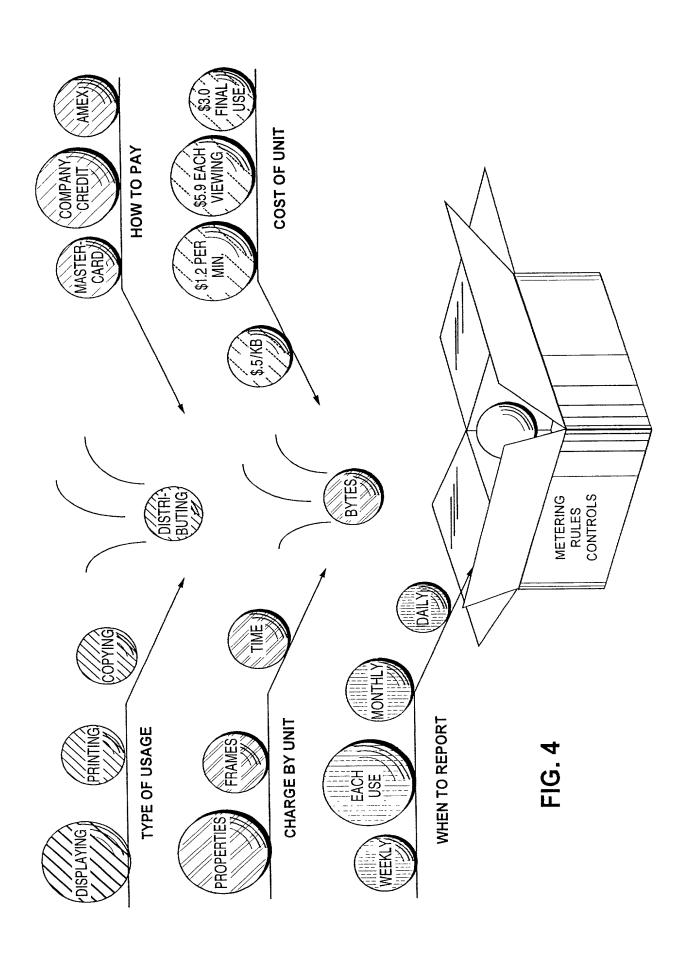
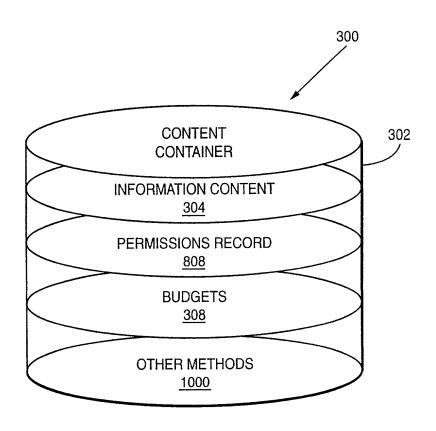
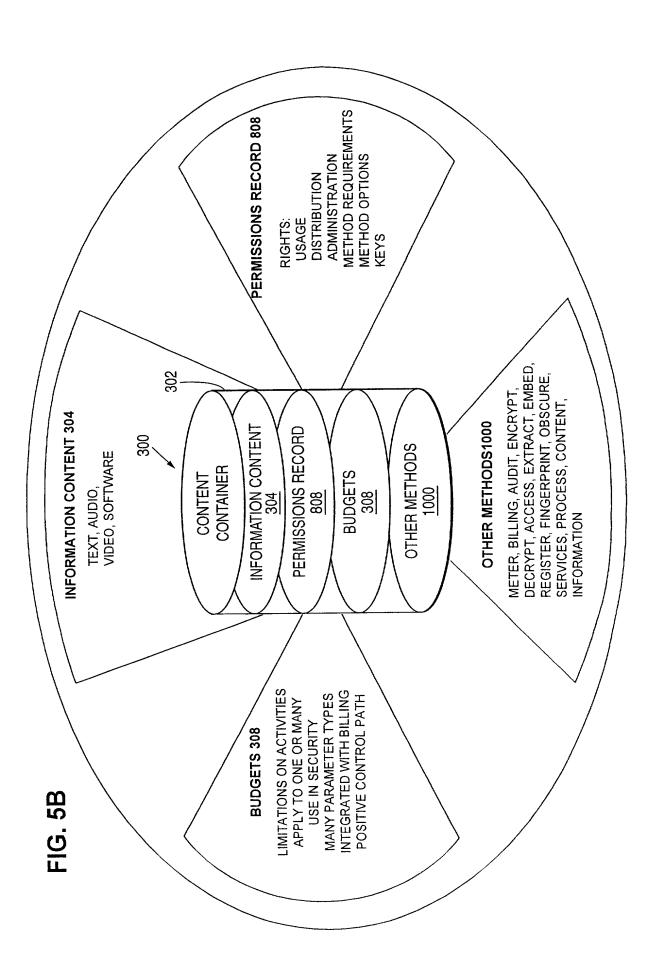
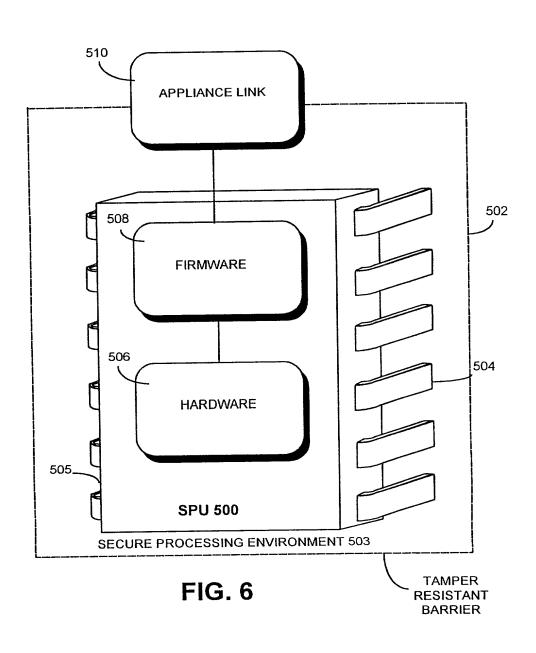
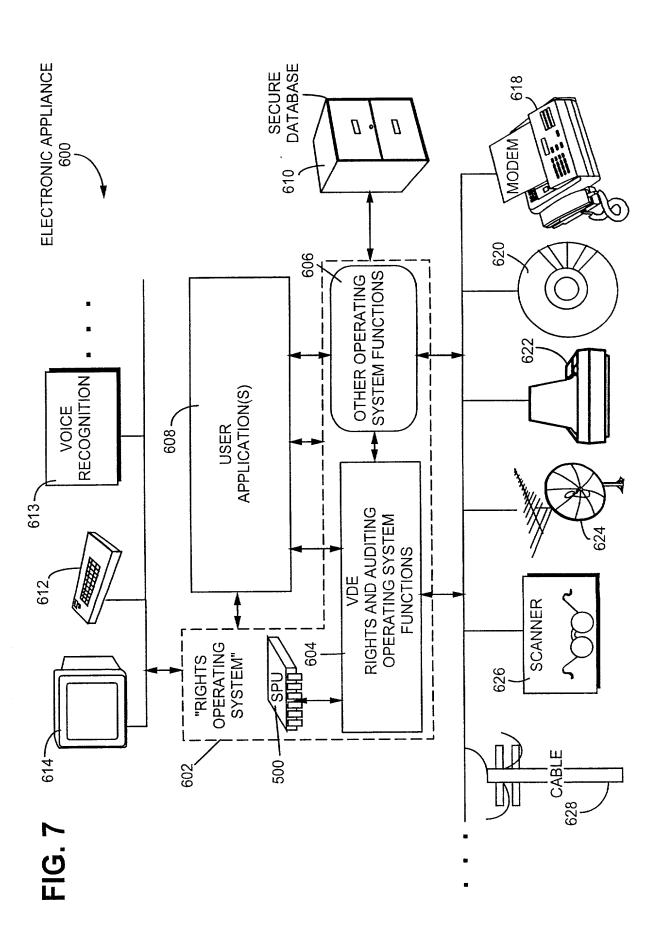


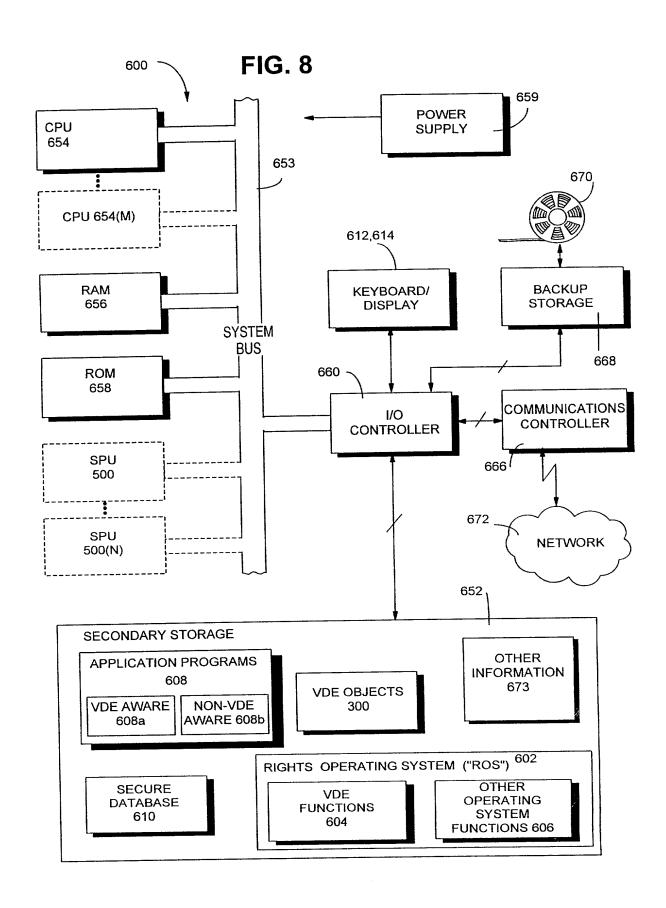
FIG. 5A

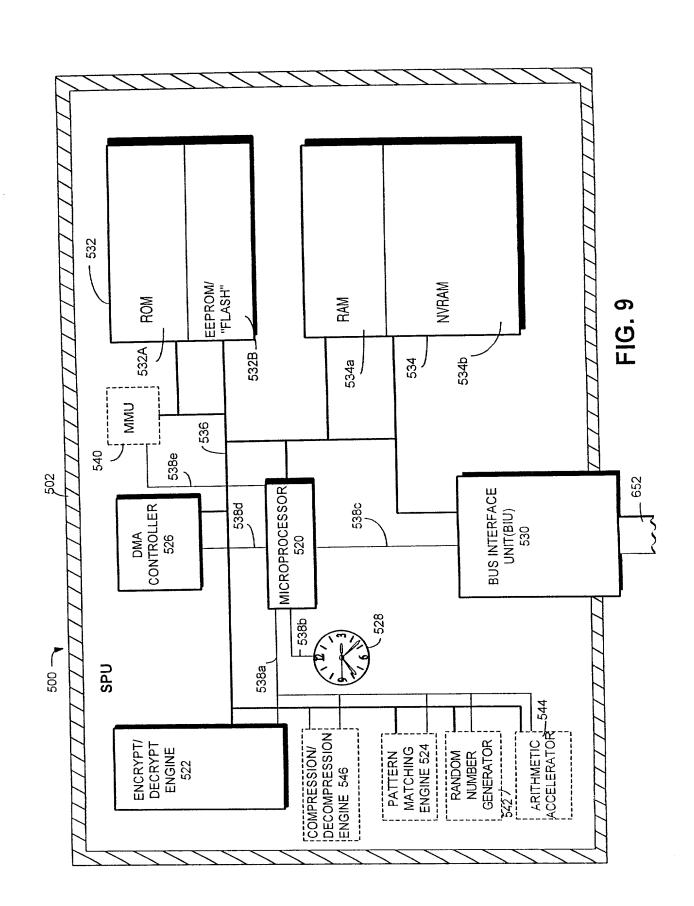


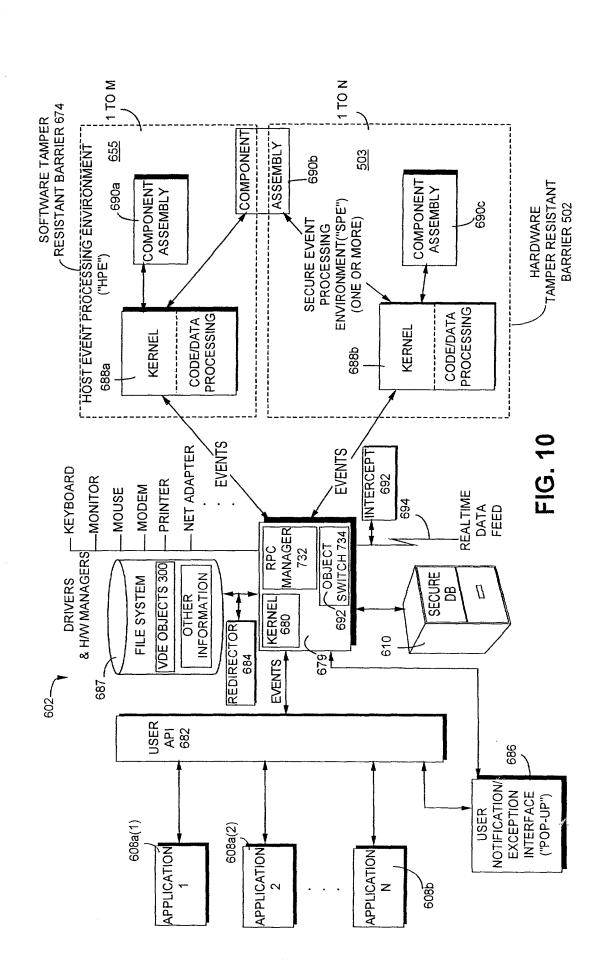


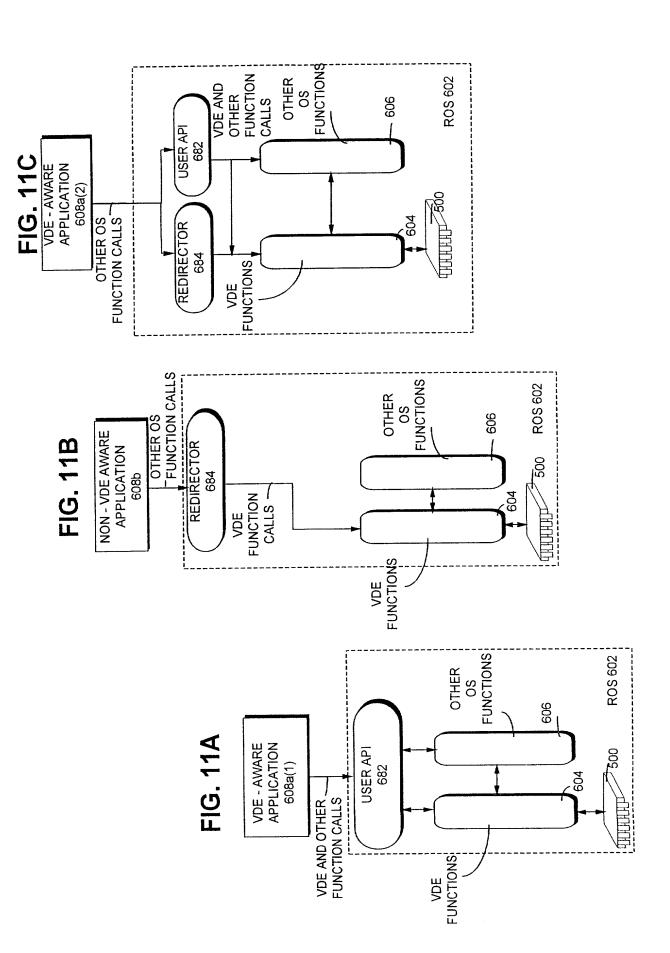


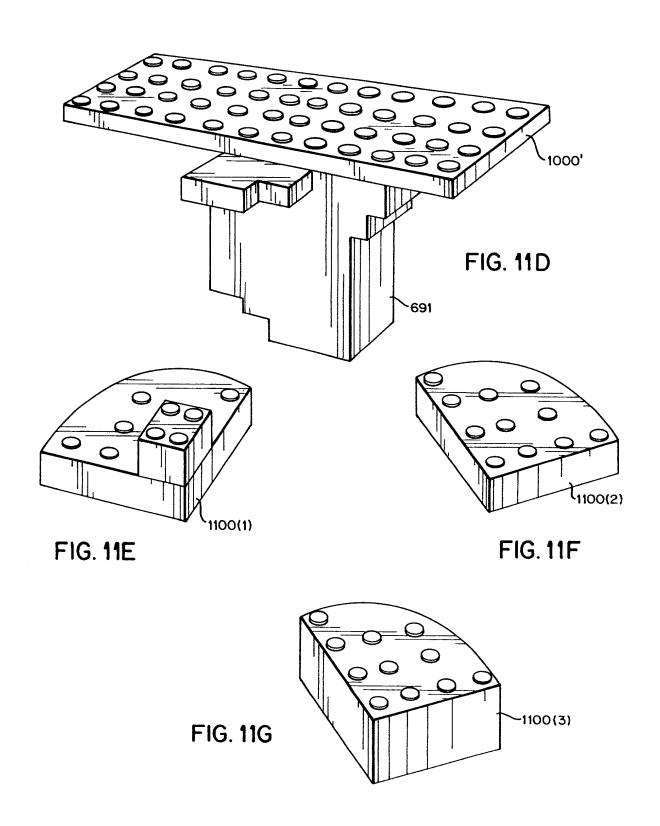












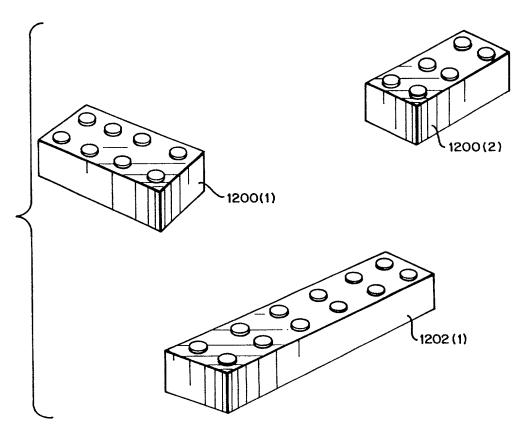
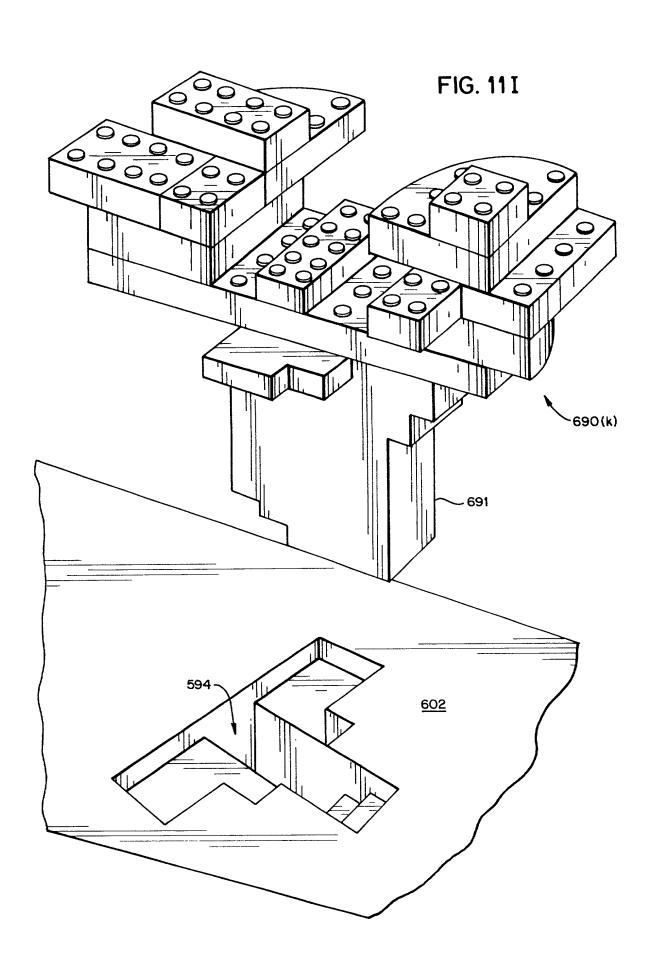
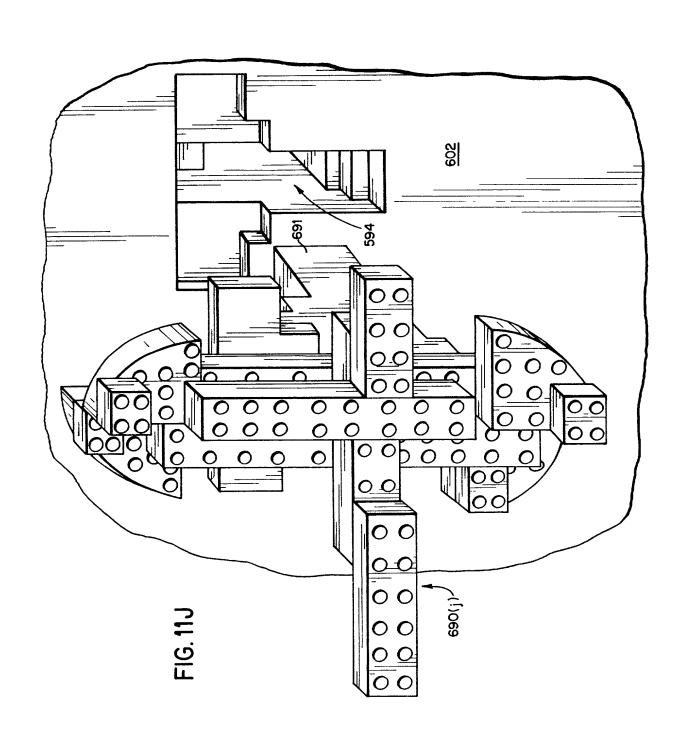
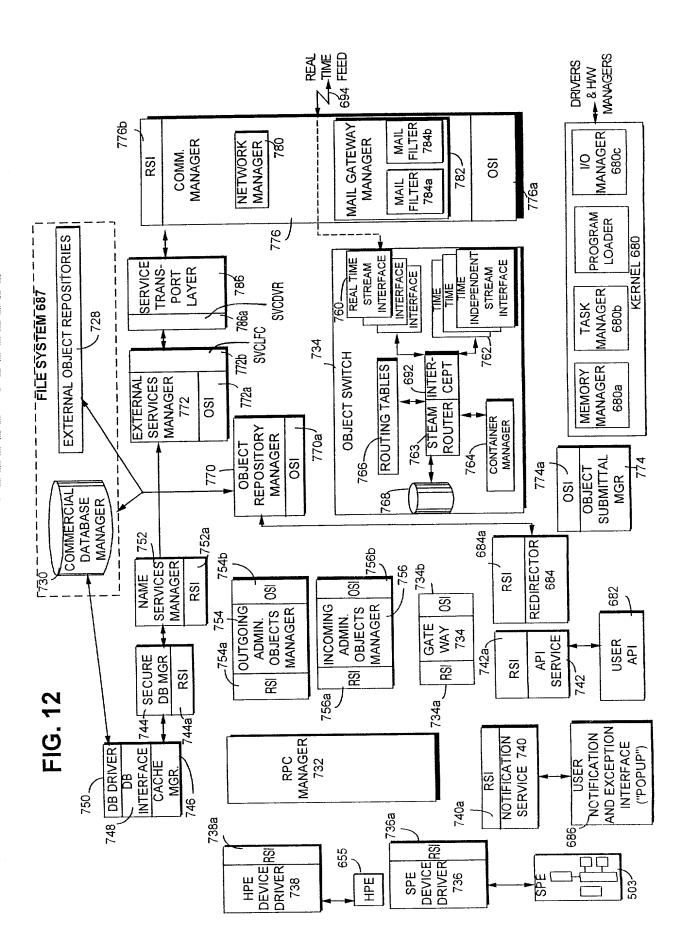


FIG. 11H







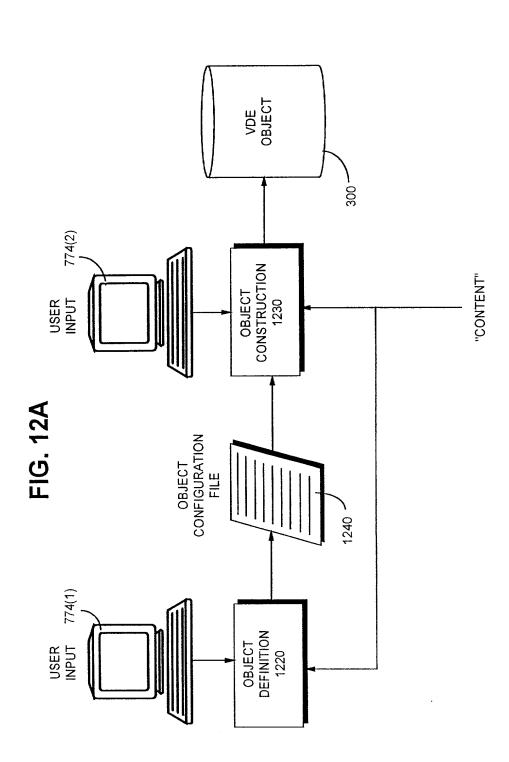
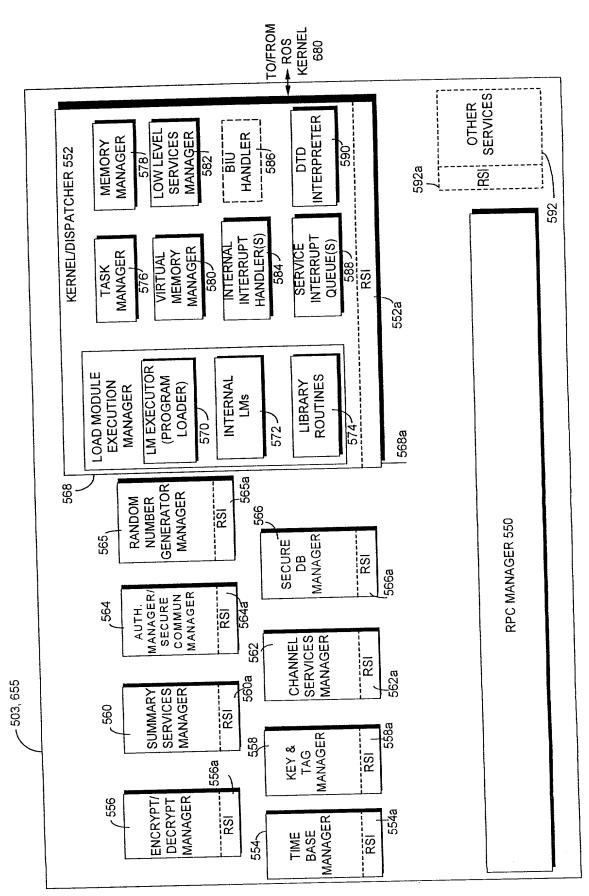


FIG. 13



## **FIG. 14A**

DEVICE FIRM WIRE LOW LEVEL SERVICES 582
INITIALIZATION
POST
DOWNLOAD CHALLENGE/RESPONSE AND AUTHENTICATION
RECOVERY
EEPROM/FLASH MEMORY MANAGER
KERNEL/DISPATCHER 552
INITIALIZATION
TASK MANAGER 576 (SLEEP/AWAKE/CONTEXT SWAP)
INTERRUPT HANDLER 584 (TIMER/BIU/POWER FAIL/WATCHDOG TIMER/ENCRYPTION COMPLETED)
BIU HANDLER 586
MEMORY MANAGER 578
INITIALIZATION (SETTING MMU TABLES
ALLOCATE
DELLOCATE
VIRTUAL MEMORY MANAGER 580
SWAP BLOCK PAGING
EXTERNAL MODULE PAGING
MEMORY COMPRESS
RPC AND TABLES 550
INITIALIZATION
MESSAGING CODE /SERVICES MANAGER
SEND/RECEIVE
STATUS
RPC DISPATCH TABLE
RPC SERVICE TABLE

TIME BASE MANAGER 554		
ENCRYTION/DECRYPTION MANAGER 556		
PK		
BULK		
KEY AND TAG MANAGER 558		
KEY STORAGE IN EEPROM		
KEY LOCATOR		
KEY GENERATOR		
CONVOLUTION ALGORITHM		
SUMMARY SERVICES MANAGER 560		
EVENT SUMMARIES		
BUDGET SUMMARIES		
DISTRIBUTER SUMMARY SERVICES		
CHANNEL SERVICES MANAGER 562		
CHANNEL HEADERS		
CHANNEL DETAILS		
LOAD MODULE EXECUTION SERVICES 568		
AUTHENTICATION MANAGER/SECURE COMMUNICATION MANAGER 564		
DATABASE MANAGER 566		
MANAGEMENT FILE SUPPORT		
TRANSACTION AND		
SEQUENCE NUMBER SUPPORT		
SRN/ HASH DTD INTERPRETER 590		
LIBRARY ROUTINES 574		
I/O CALLS(STRING SEARCH ETC.)		
MISC. ITEMS THAT ARE PROBABLY		
LIBRARY ROUTINES		
TAG CHECKING,MD5,CRC'S		
INTERNAL LM'S 572 FOR BASIC METHODS		
METER LOAD MODULE(S)		
BILLING LOAD MODULE(S)		
BUDGET LOAD MODULE(S)		
AUDIT LOAD MODULE(S)		
READ OBJECT LOAD MODULE(S)		
WRITE OBJECT LOAD MODULE(S)		
OPEN OBJECT LOAD MODULE(S)		
CLOSE OBJECT LOAD MODULE(S)		

## FIG. 14B

•

PUBLIC KEY AND PRIVATE KEY, SYSTEM ID,
AUTHENTICATION CERTIFICATE, VDE SYSTEM PUBLIC
KEY, PRIVATE DES KEY
TOP LEVEL KEYS FOR OBJECTS
TOP LEVEL BUDGET INFO

METER SUMMATION VALUES

KEY RECORDS FOR BUDGET RECORDS, AUDIT
RECORDS, STATIC MANAGEMENT RECORDS, UPDATED

MANAGEMENT RECORDS, ETC.

<u></u>	
DEVICE DATA TABLE	
SITE ID	
TIME	
ALARMS	
TRANSACTION/SEQUENCE #'S	
MISCELLANEOUS	

MISCELLANEOUS	
MEMORY MAP	
MAP METERS	
LM/UDT TABLE	
TASK MANAGER 576	
CHANNEL(S)	
SUMMARY SERVICES 560	

SECURE DATABASE TAGS
SRN ENTRIES

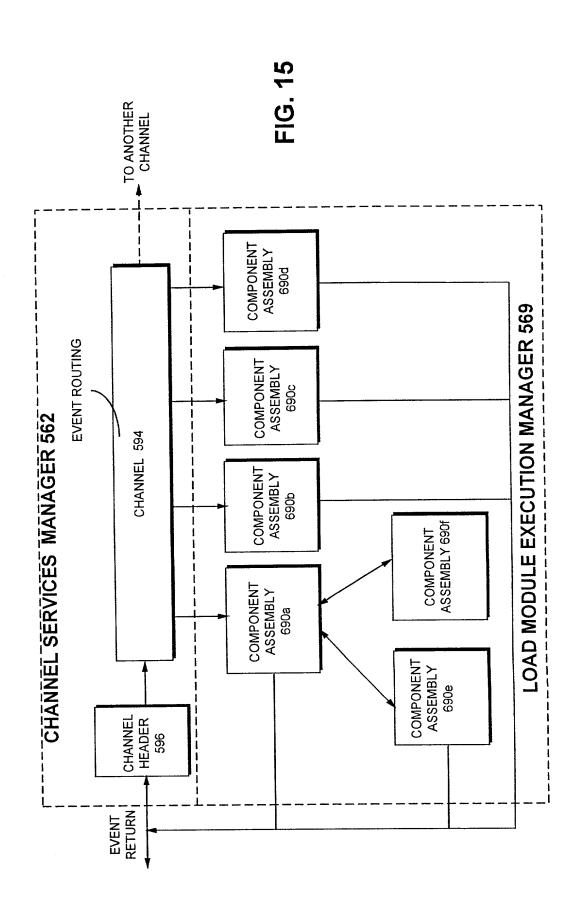
HASH ENTRIES

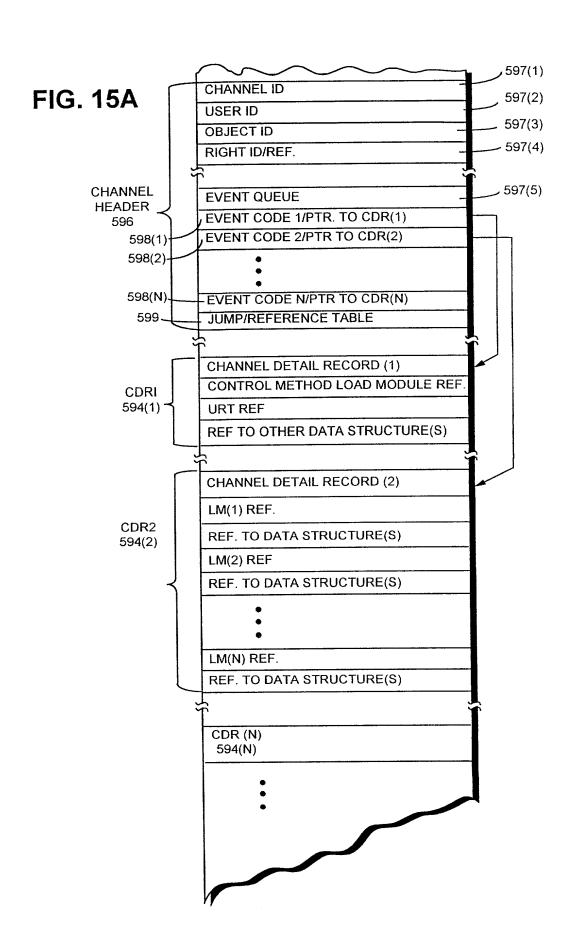
•

## FIG. 14C

STACK		
•		
CHANNEL SWAP BLOCK		
CHANNEL SWAP BLOCK	CHANNEL LM	
	CHANNEL HEADER & D1	
CONTROL SWAP BLOCK		
CONTROL SVAN BEGOR	CONTROL LM	
	CONTROL D1	
	COMMIT LM	
	COMMIT D1, D2, D3	
EVENT SWAP BLOCK	EVENT LM	
	MAP TABLE (SINGLE) D1	
METER SWAP BLOCK		
	METER LM	
	METER UDE DELTA,DELTA'	
	METER TRAIL LM	
	METER TRAIL UDE	
	DELTA,DELTA'	
BUDGET SWAP BLOCK	METER LM	
	METER UDE DELTA,DELTA'	
	METER TRAIL LM	
	METER TRAIL UDE	
	DELTA,DELTA'	
BILLING SWAP BLOCK		
	BILLING LM	
	METER UDE	
	BUDGET UDE	
	BILLING TABLE UDE	
	BILLING TRAIL LM	
	BILLING TRAIL UDE DELTA'	

•



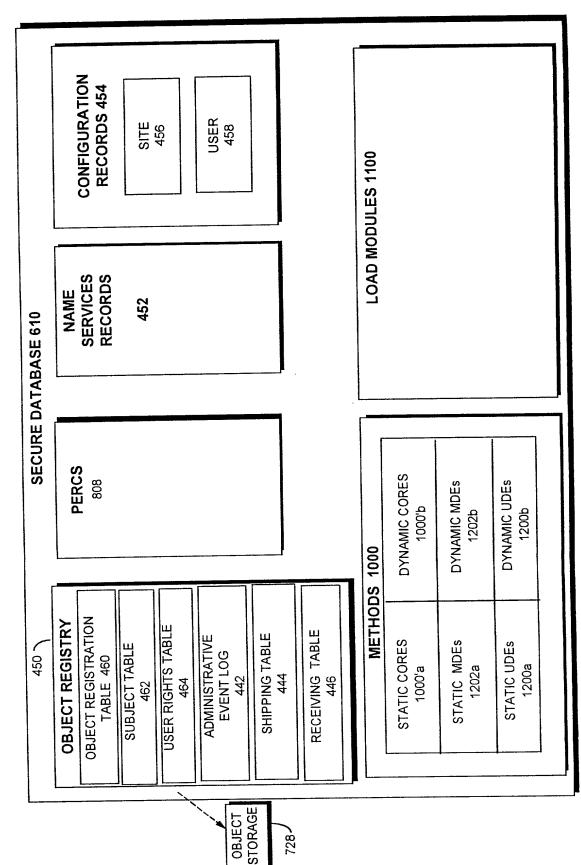


OPEN CHANNEL FIG. 15B (OBJECT, USER, RIGHT) **ALLOCATE** 1125 "AVAILABLE" **CHANNEL ACCESS** 1127 "BLUEPRINT" WRITE TO 1129 CHANNEL HEADER **OBTAIN CONTROL** 1131 **METHOD** "BIND" CONTROL 1133 **METHOD TO CHANNEL** PASS "INIT" EVENT 1135 TO CHANNEL **ACCESS** 1137 **COMPONENTS** "BIND" COMPONENTS TO 1139

CHANNEL BY CONSTRUCTING CHANNEL DETAIL RECORD(S) FOR EACH EVENT WITHIN "RIGHT"

**END** 

FIG. 16



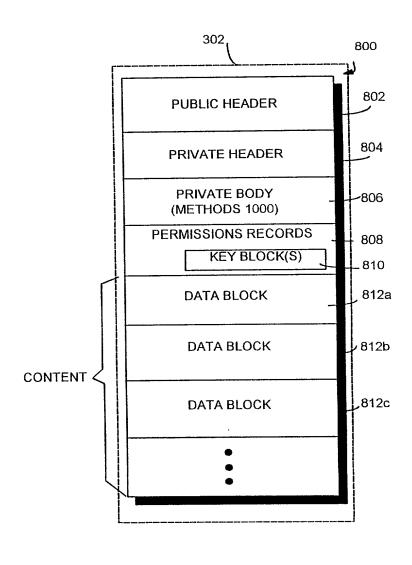


FIG. 17

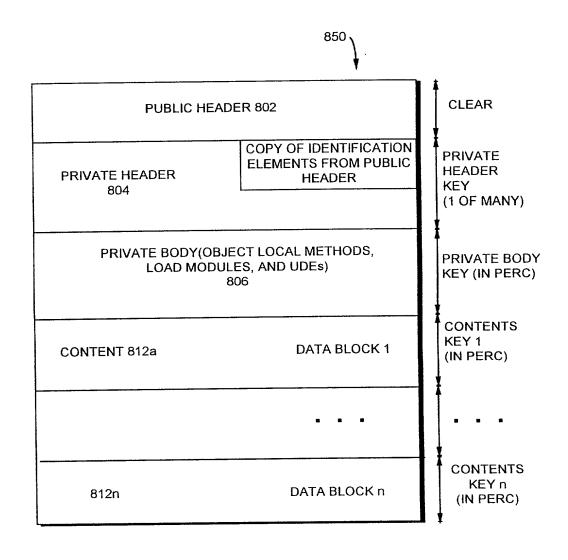


FIG. 18

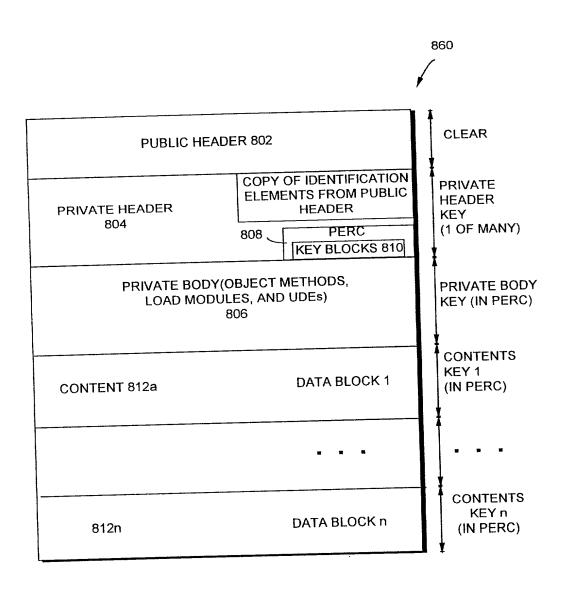


FIG. 19

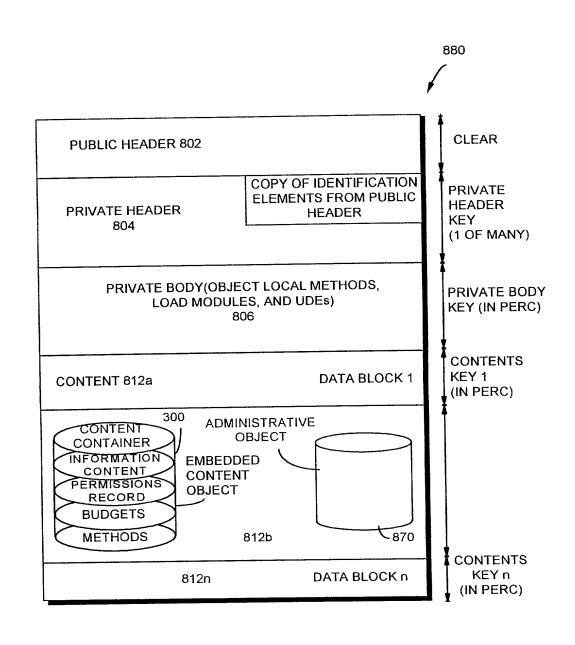


FIG. 20

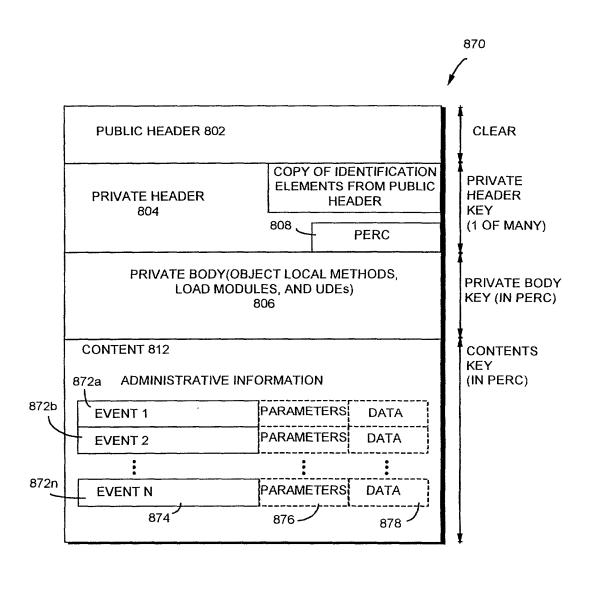


FIG. 21

FIG. 22

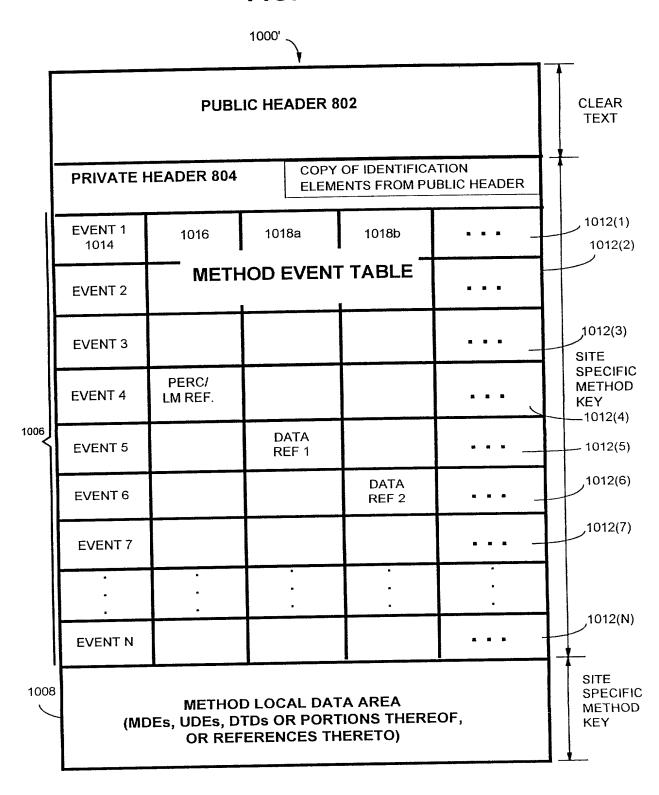


FIG. 23

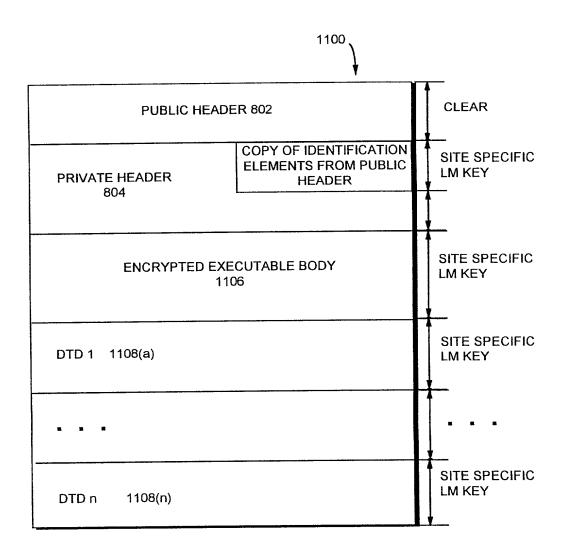


FIG. 24

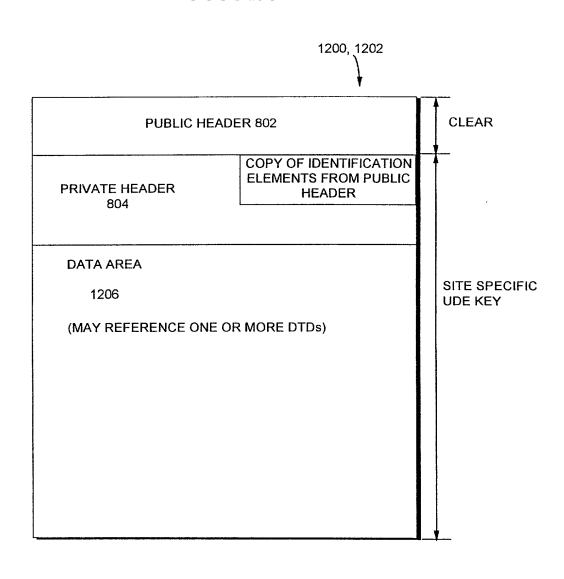


FIG. 25A

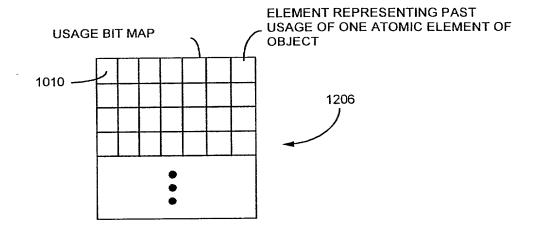


FIG. 25B

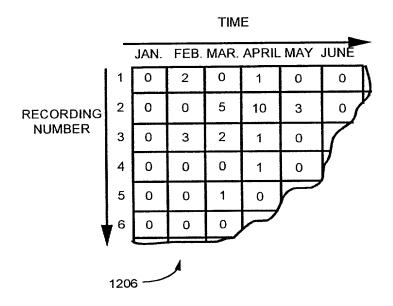
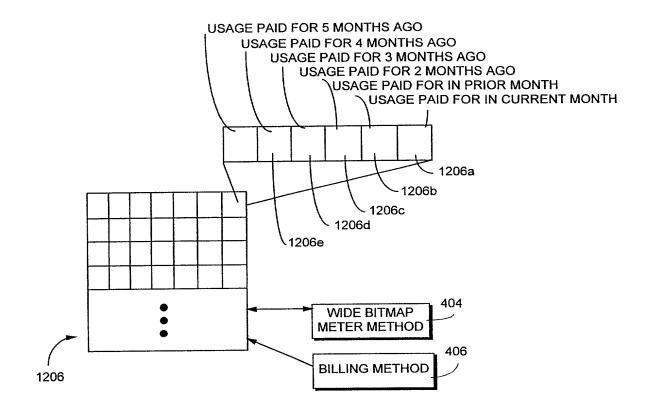
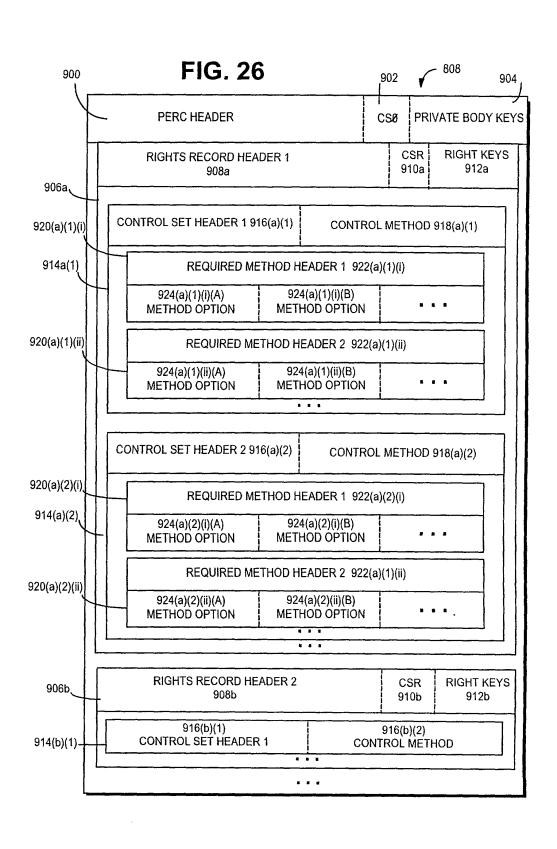


FIG. 25C





## **FIG. 26A**

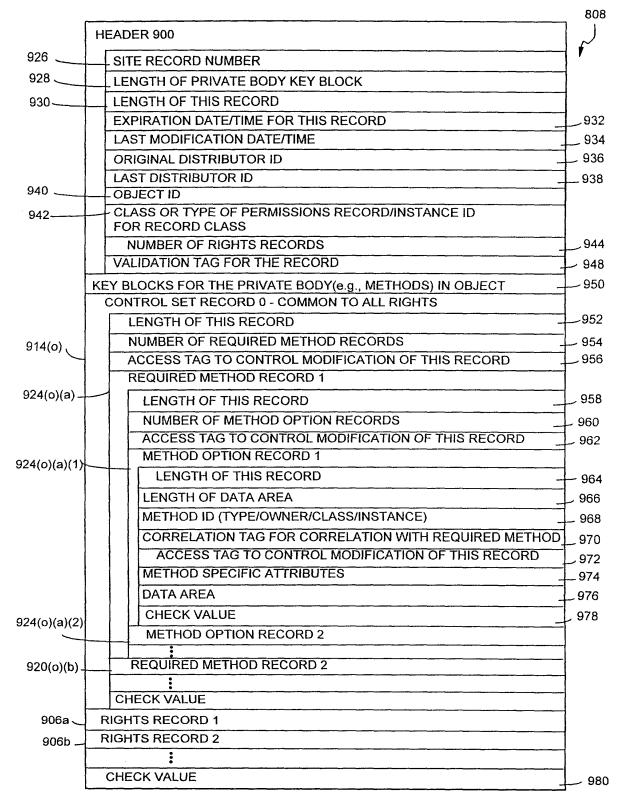


FIG. 26B

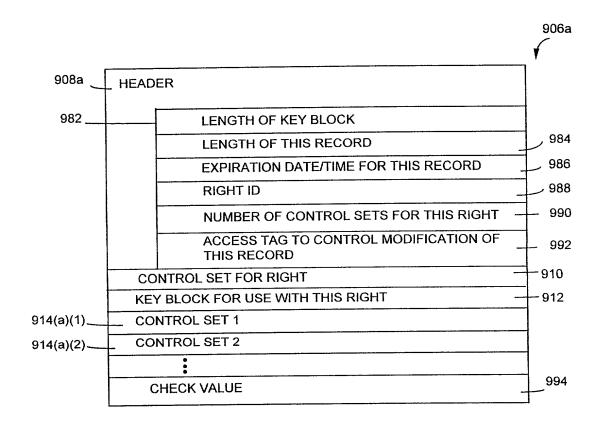


FIG. 27

	444A(1)	
	SITE RECORD NUMBER	444
HEADER 444A	USER (GROUP) ID -	444A(2)
	REF. TO "FIRST" COMPLETED OUTGOING SHIPPING RECORD	444A(3)
	REF. TO "LAST" COMPLETED OUTGOING SHIPPING RECORD	_444A(4)
	REF. TO "FIRST" SCHEDULED OUTGOING SHIPPING RECORD	444A(5)
	REF. TO "LAST" SCHEDULED OUTGOING SHIPPING RECORD	444A(6)
	VALIDATION TAG FROM NAME SERVICES RECORD	444A(7)
	VALIDATION TAG FOR "FIRST" OUTGOING SHIPPING RECORD(S)	444A(8)
	CHECK VALUE	444A(9)
:		1 T
SHIPPING RECORD 445(1)	SITE RECORD NUMBER	445(1)(A)
	FIRST DATE/TIME FOR SCHEDULED SHIPMENT	445(1)(B)
	LAST DATE/TIME FOR SCHEDULED SHIPMENT	445(1)(C)
	ACTUAL DATE/TIME OF COMPLETED SHIPMENT	445(1)(D)
	OBJECT ID OF ADMINISTRATIVE OBJECT (TO BE) SHIPPED	445(1)(E)
	REF. TO ENTRY IN ADMINISTRATIVE EVENT LOG	445(1)(F)
	REF. TO NAME SERVICES RECORD NAMING RECIPIENT	445(1)(G)
	PURPOSE OF SHIPMENT	445(1)(H)
	STATUS OF SHIPMENT	445(1)(1)
	REF. TO "PREVIOUS" OUTGOING SHIPPING RECORD	445(1)(J)
	REF. TO "NEXT" OUTGOING SHIPPING RECORD	445(1)(K)
	VALIDATION TAG FROM HEADER	445(1)(L)
	VALIDATION TAG TO ADMINISTRATIVE EVENT LOG	445(1)(M)
	VALIDATION TAG TO NAME SERVICES RECORD	445(1)(N)
	VALIDATION TAG FROM PREVIOUS RECORD	445(1)(0)
	VALIDATION TAG TO NEXT RECORD	445(1)(P)
	CHECK VALUE	445(1)(Q)
	•	
	SHIPPING RECORD N	445(1)(R)

**FIG. 28** 

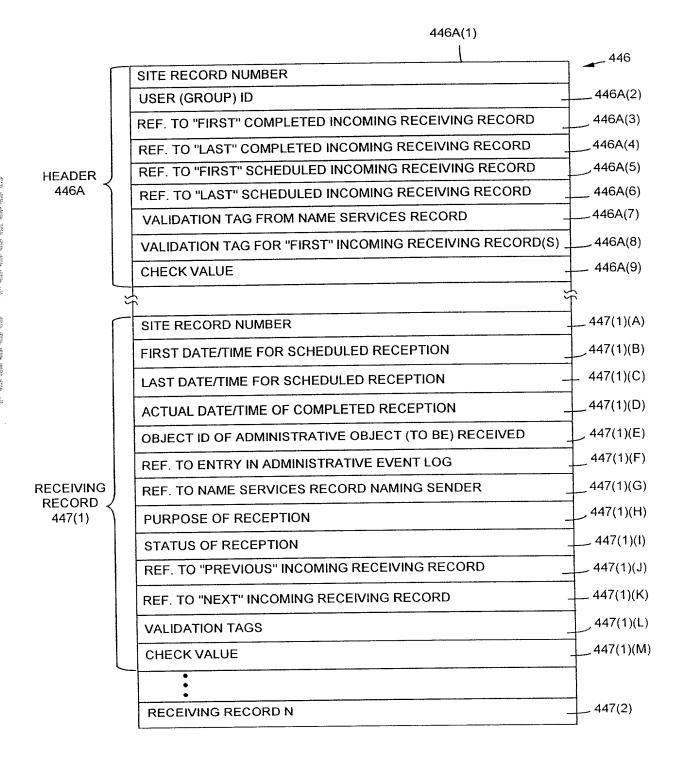
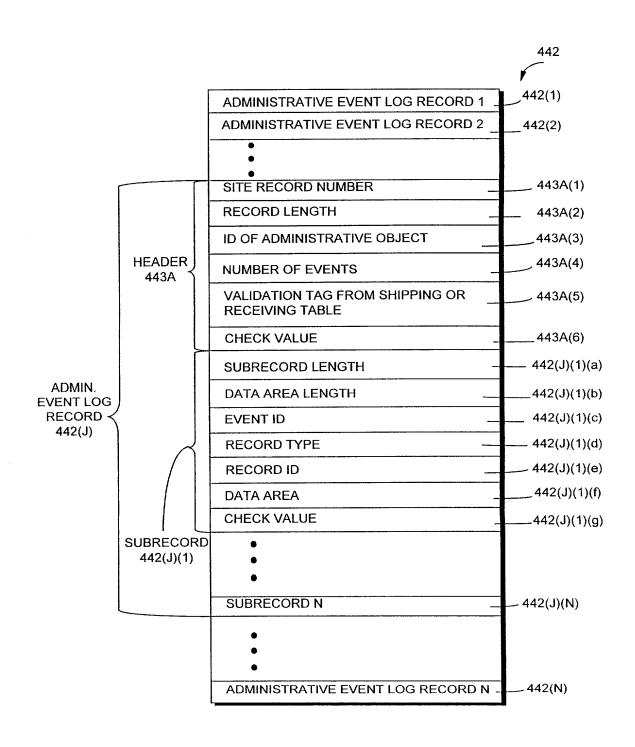
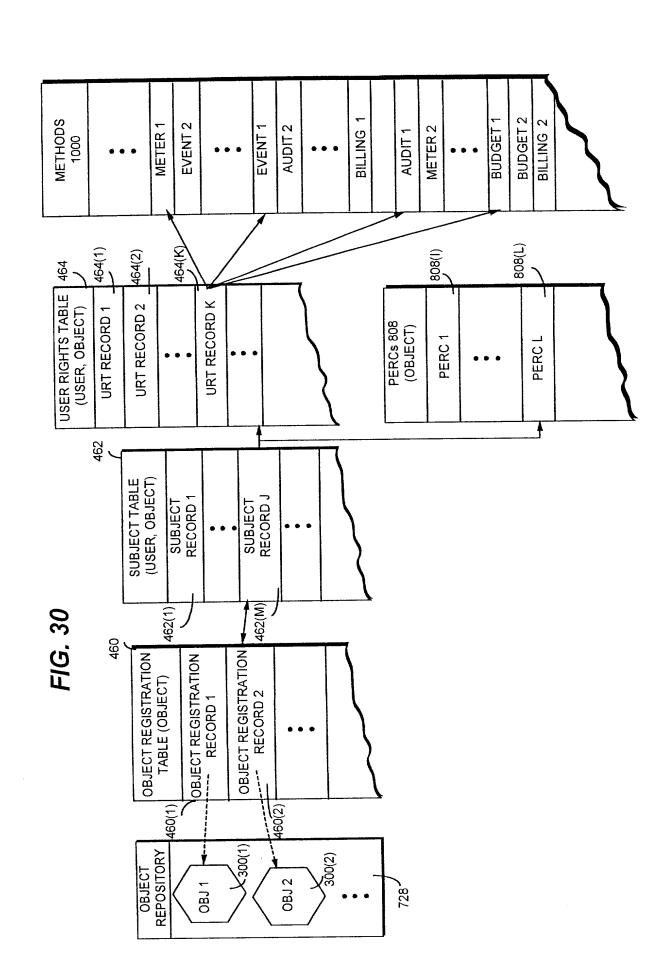


FIG. 29





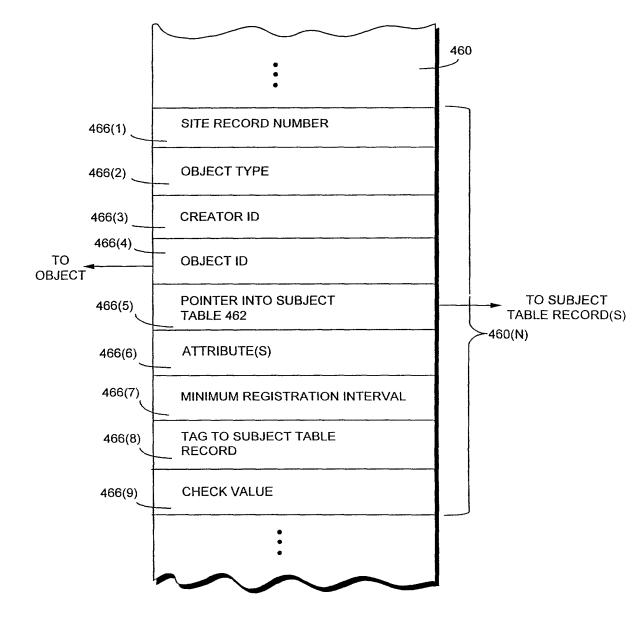
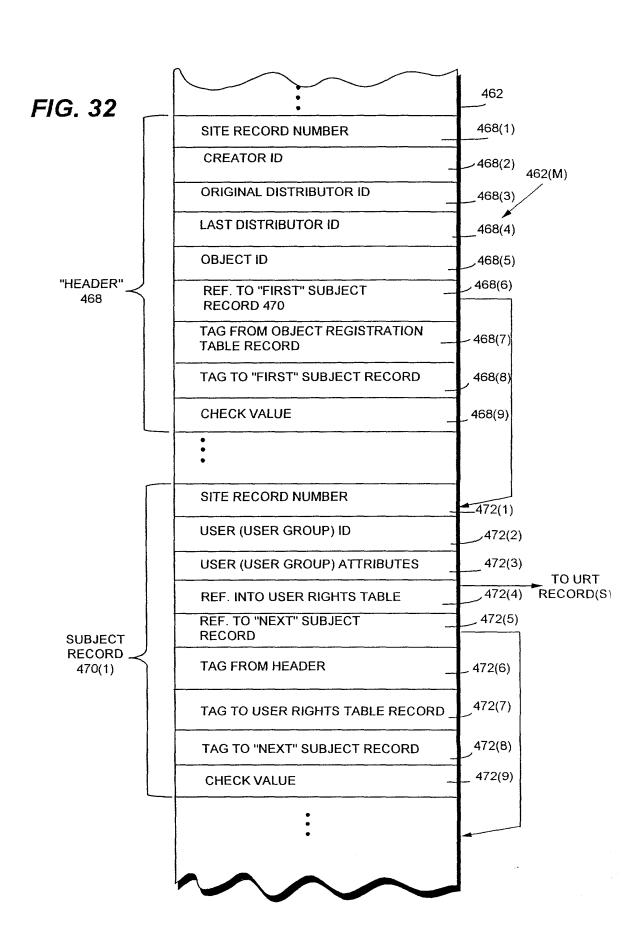
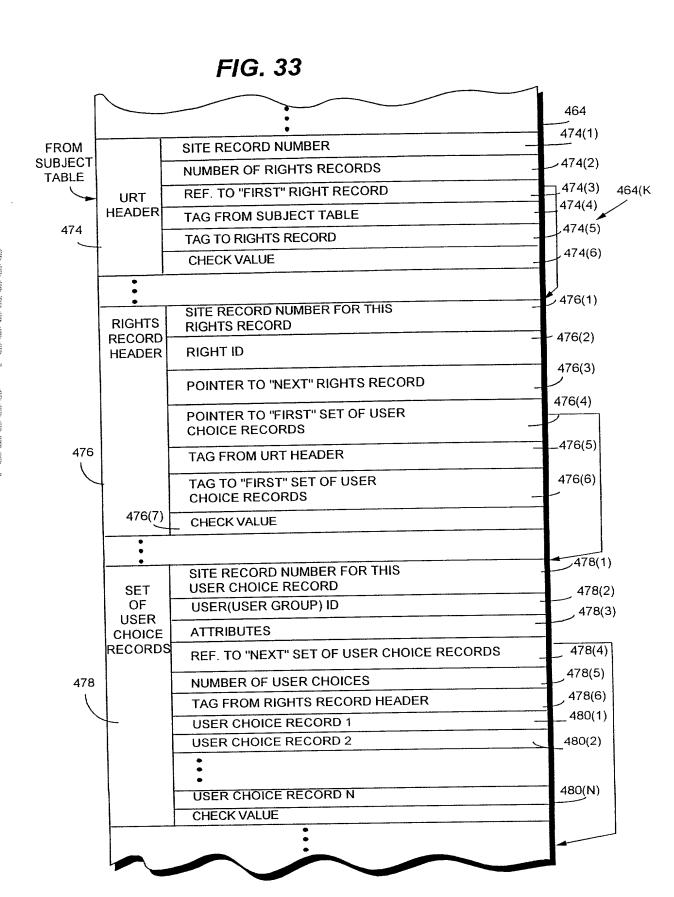


FIG. 31





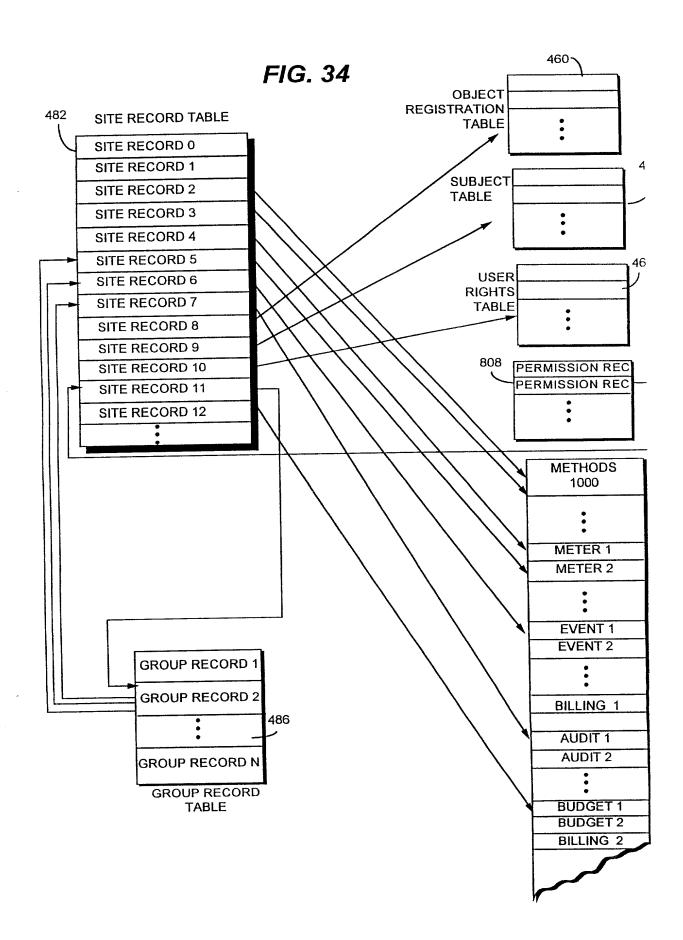


FIG. 34A

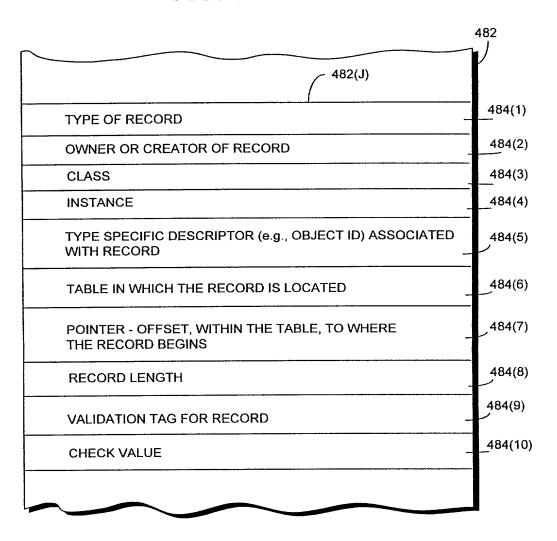
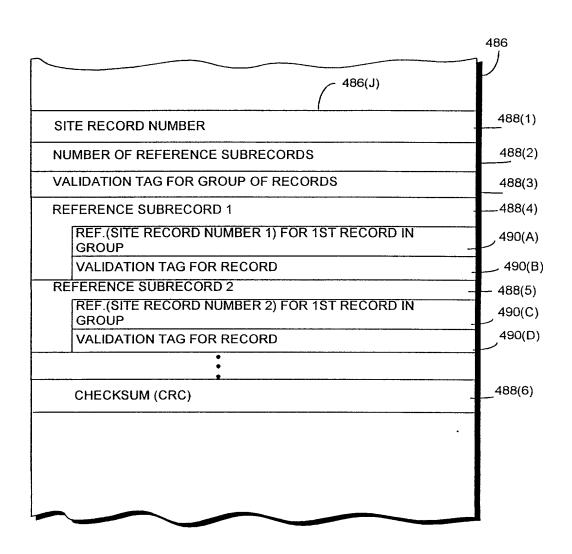
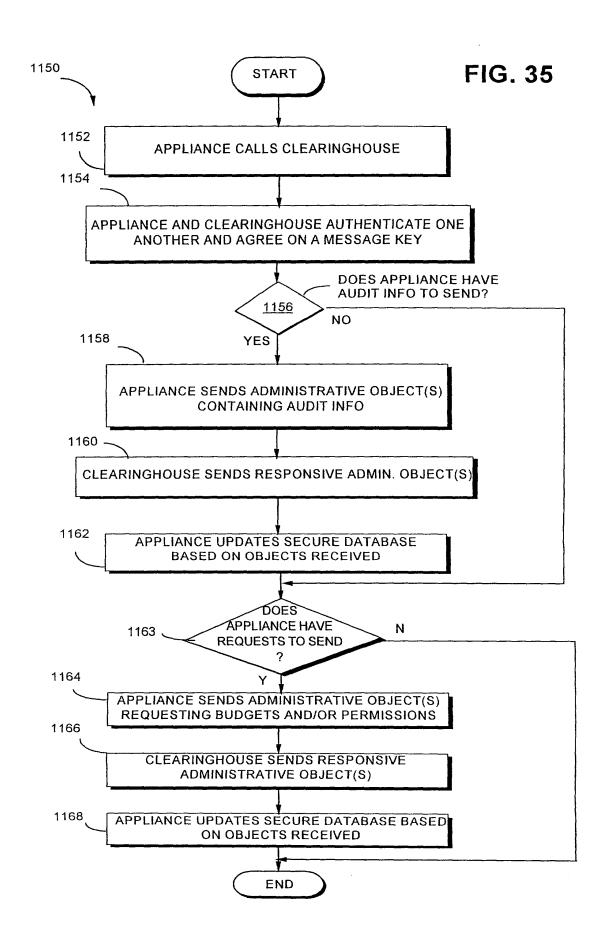
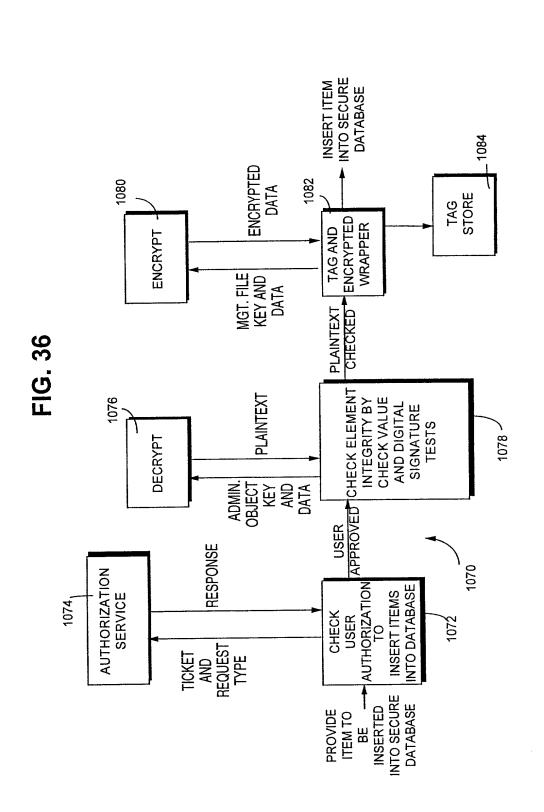


FIG. 34B







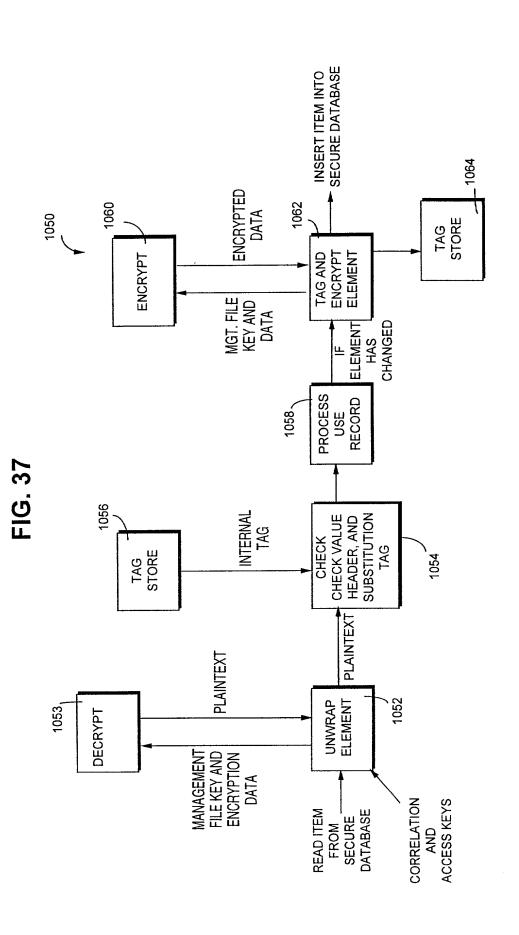
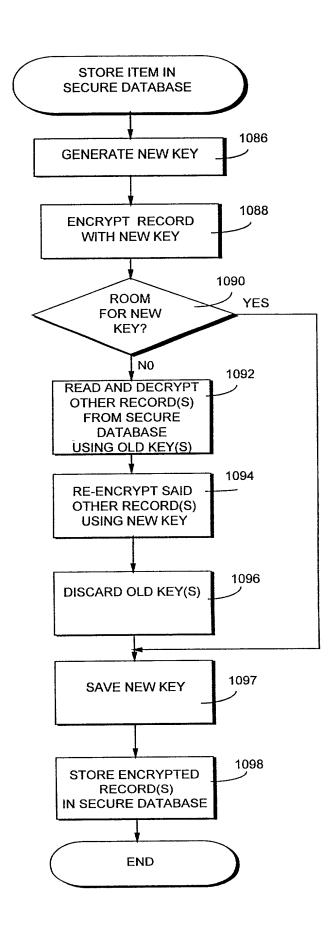


FIG. 38



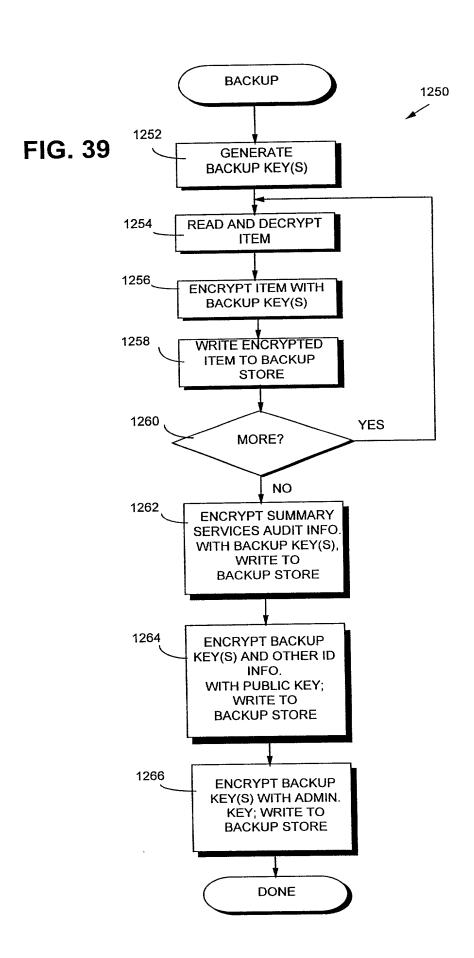
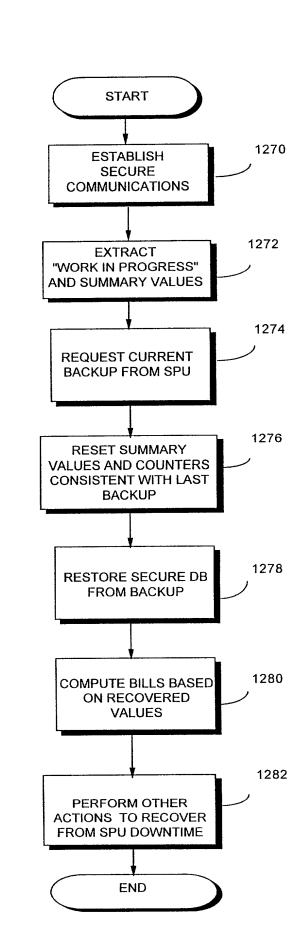


FIG. 40

1268



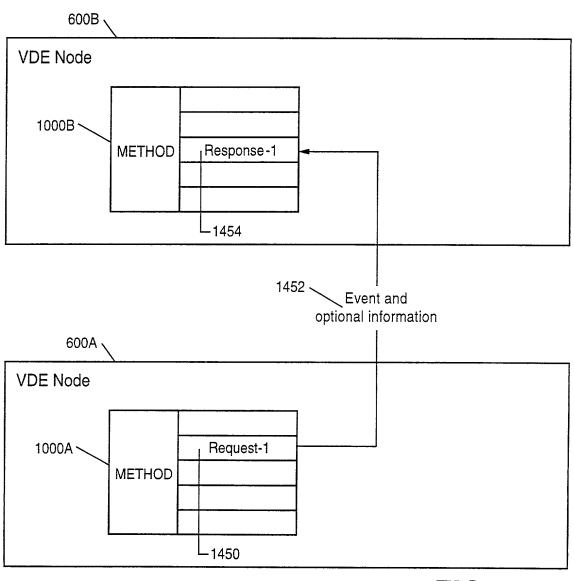


FIG. 41a

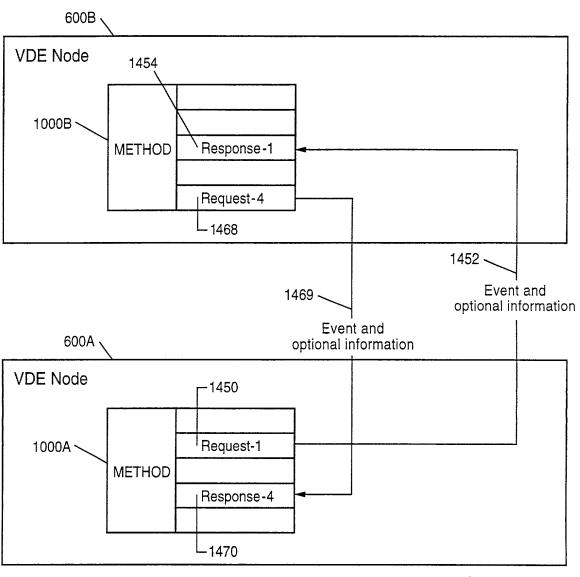
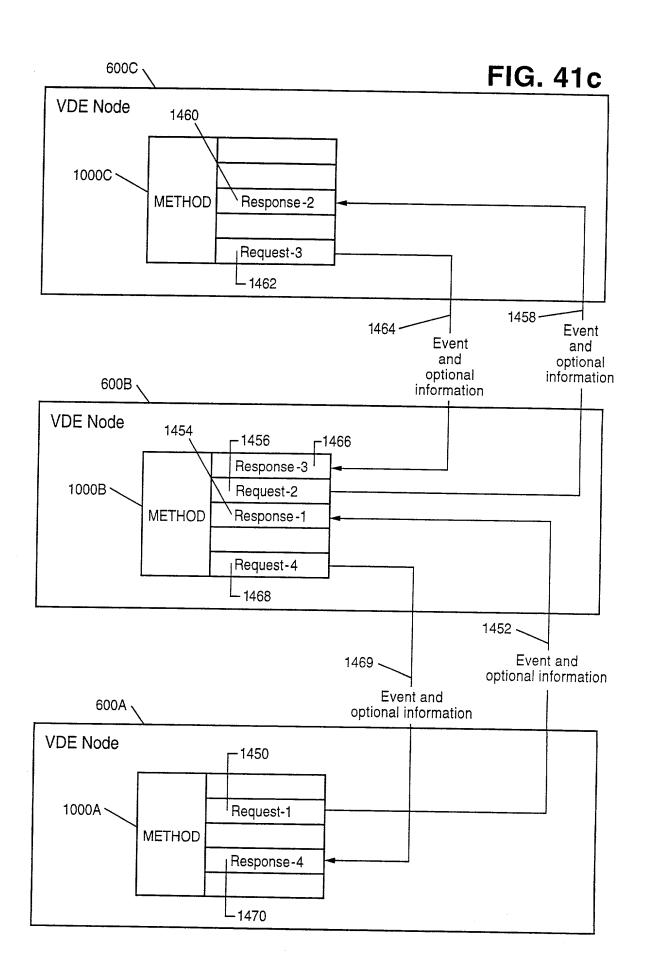
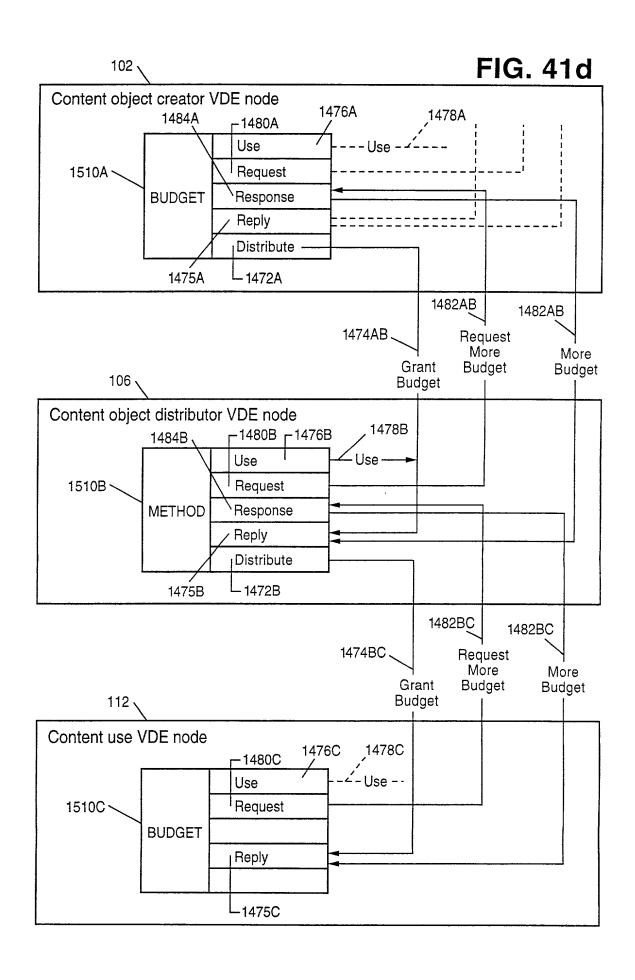
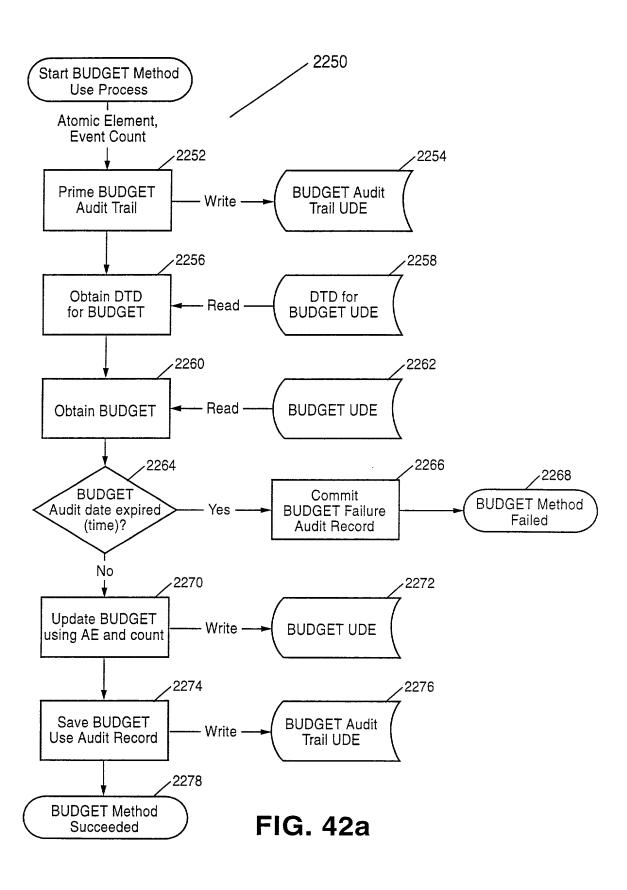
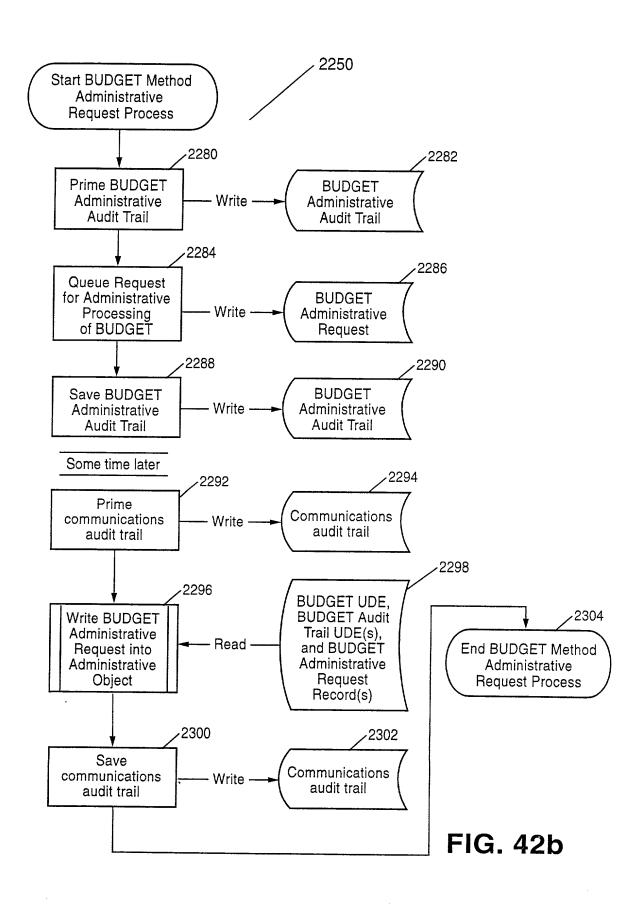


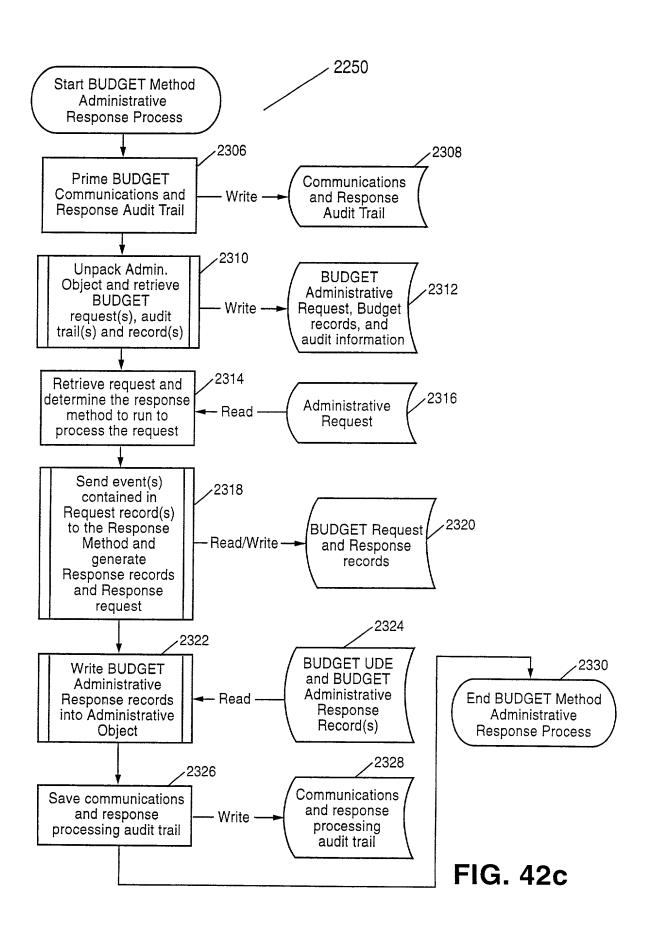
FIG. 41b

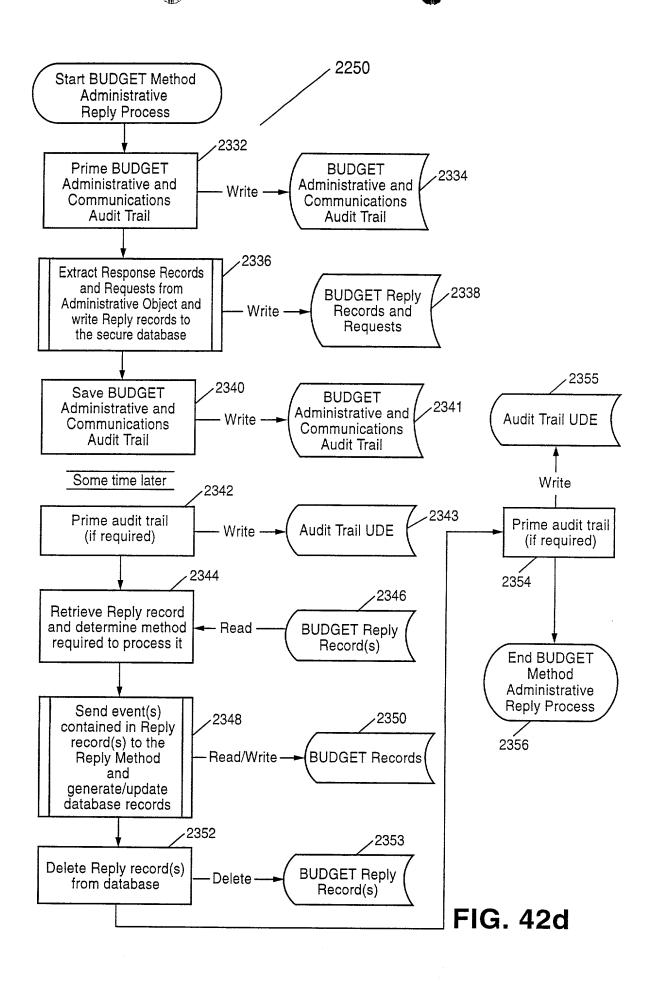












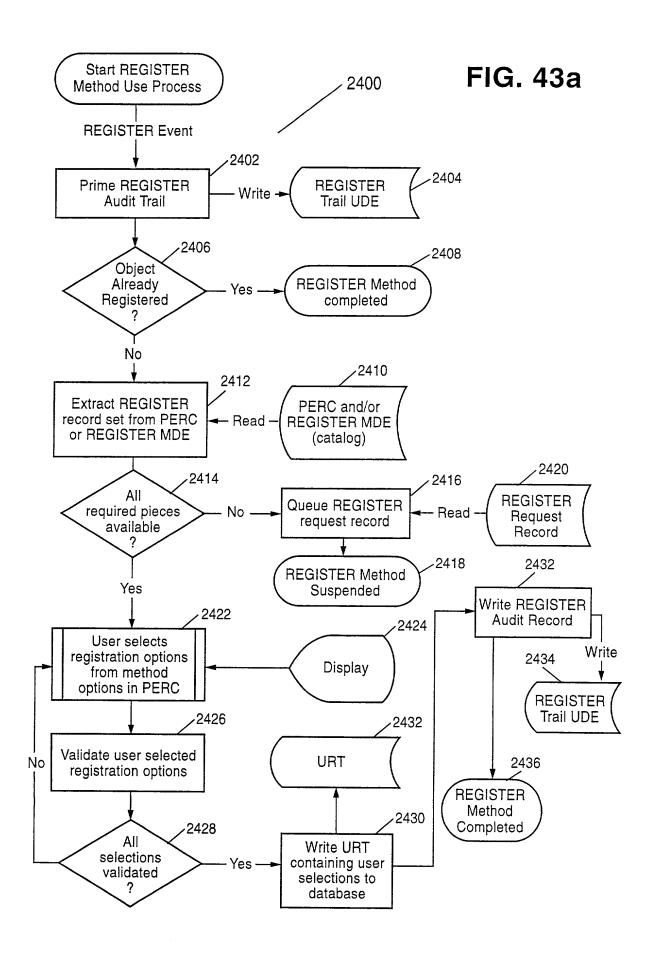
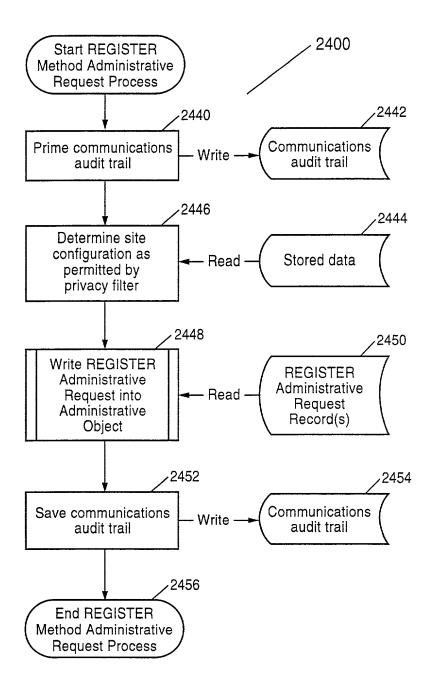
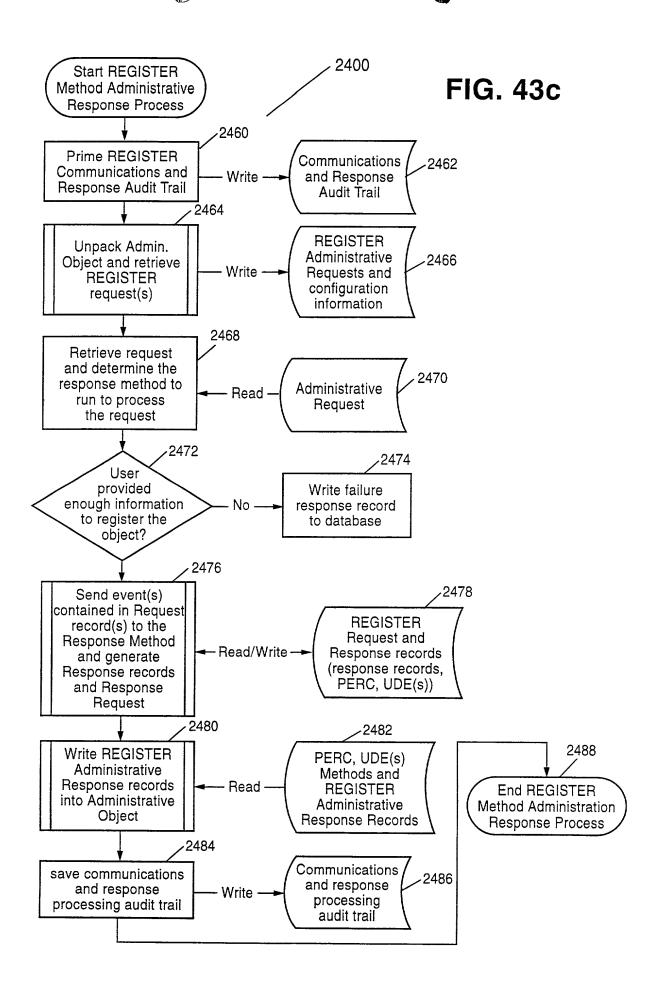
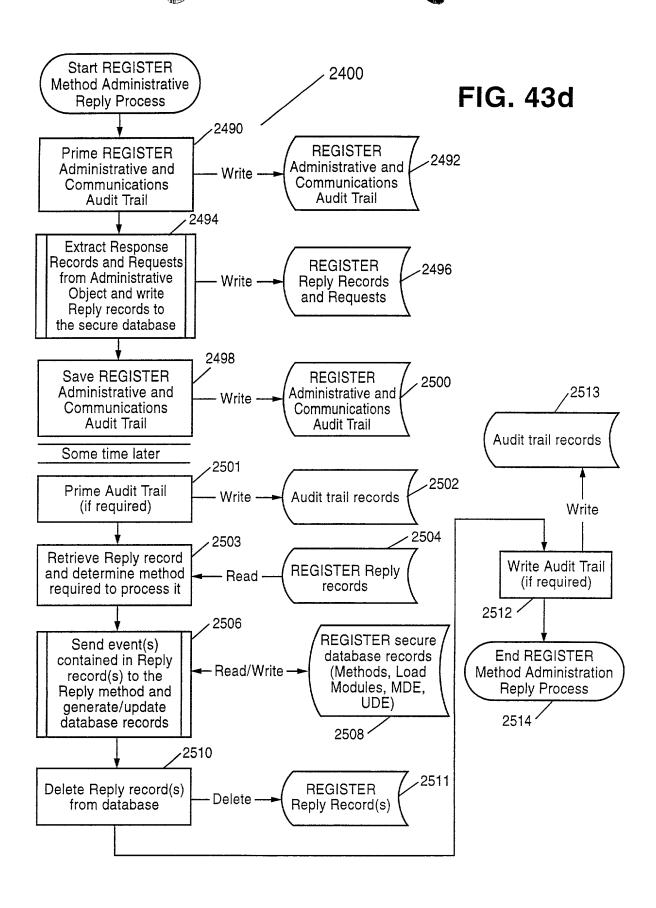
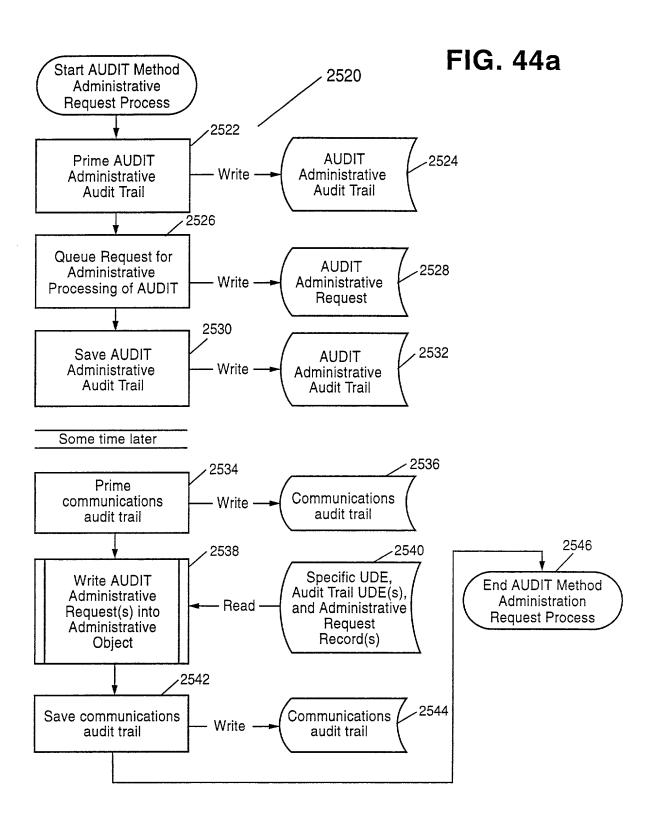


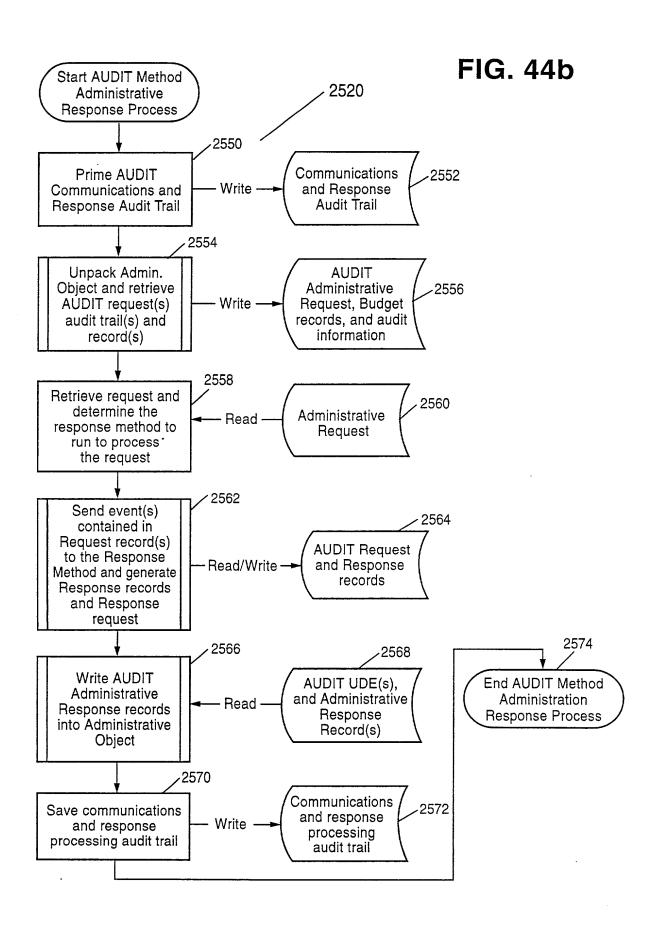
FIG. 43b











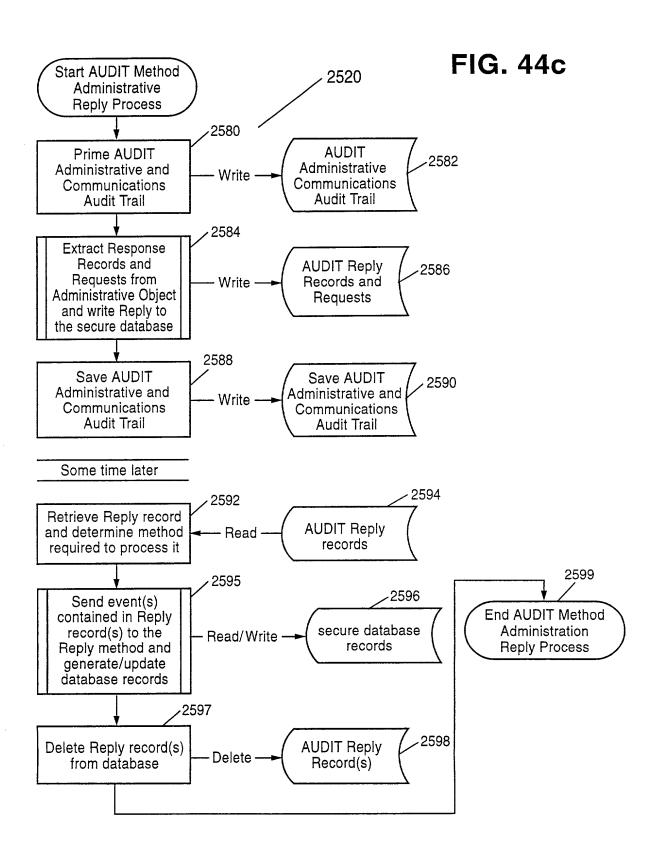


FIG. 45

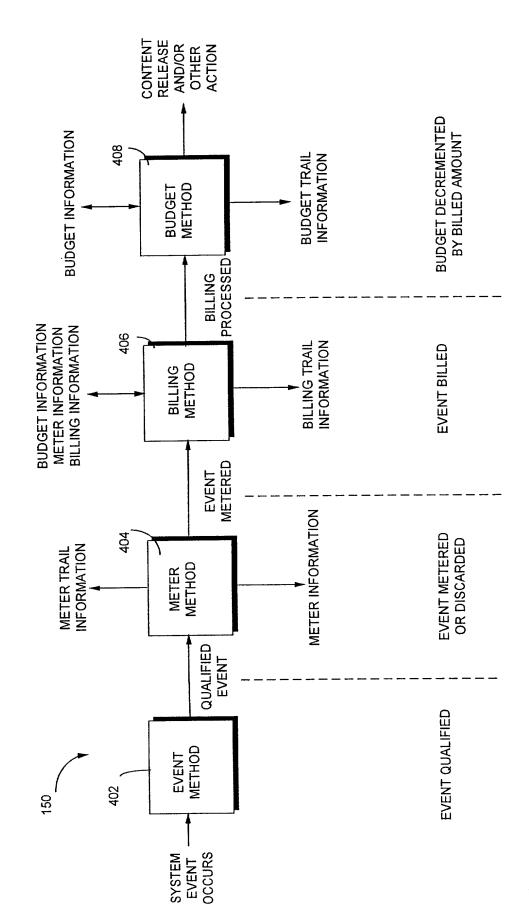
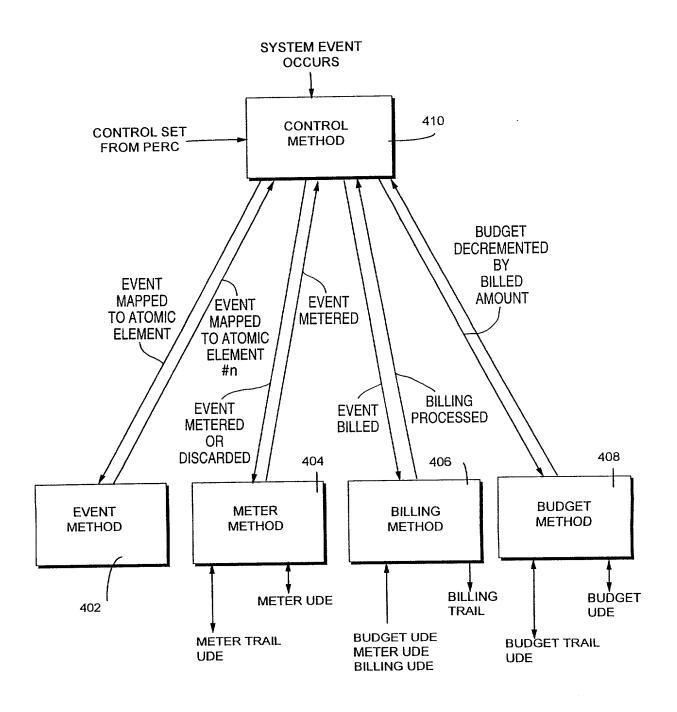
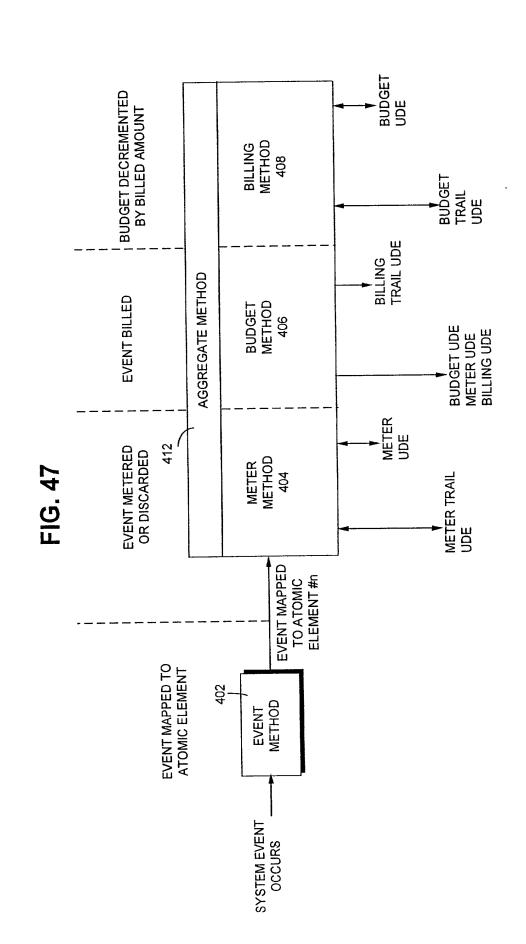
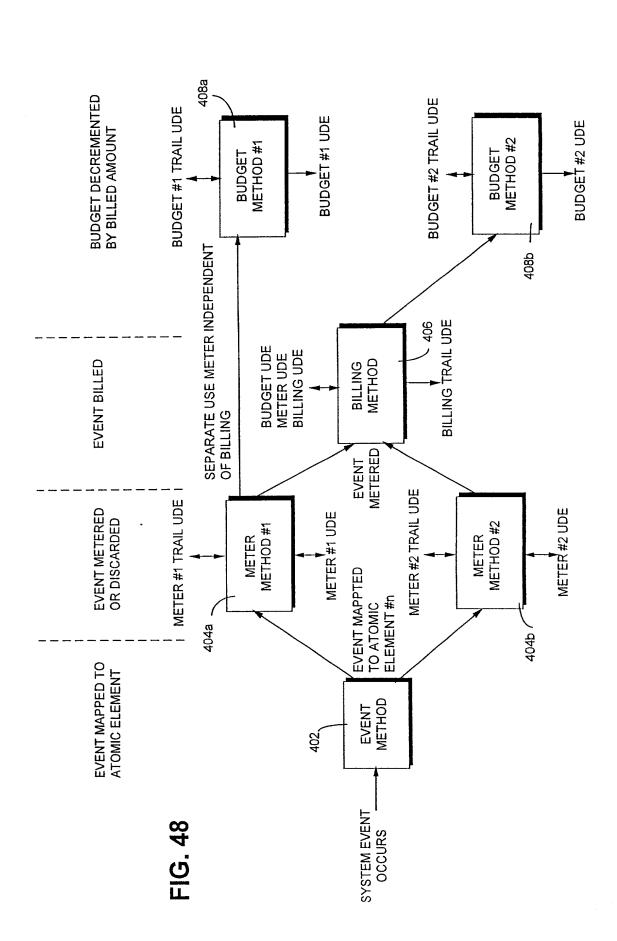
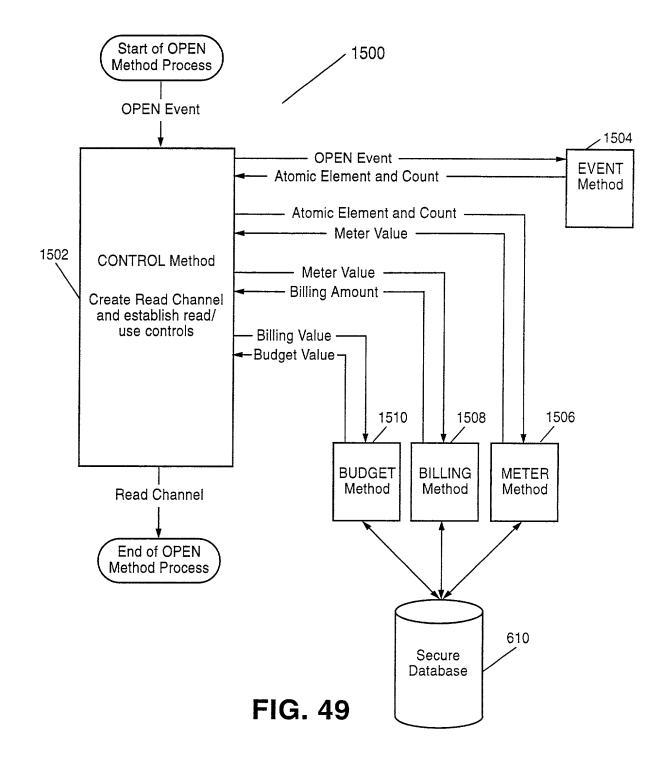


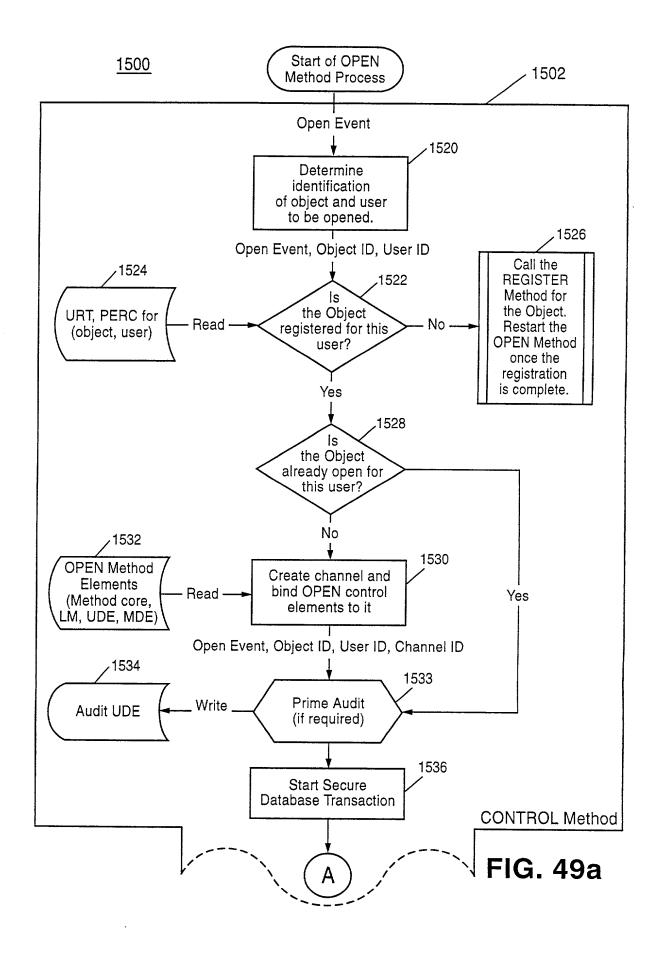
FIG. 46

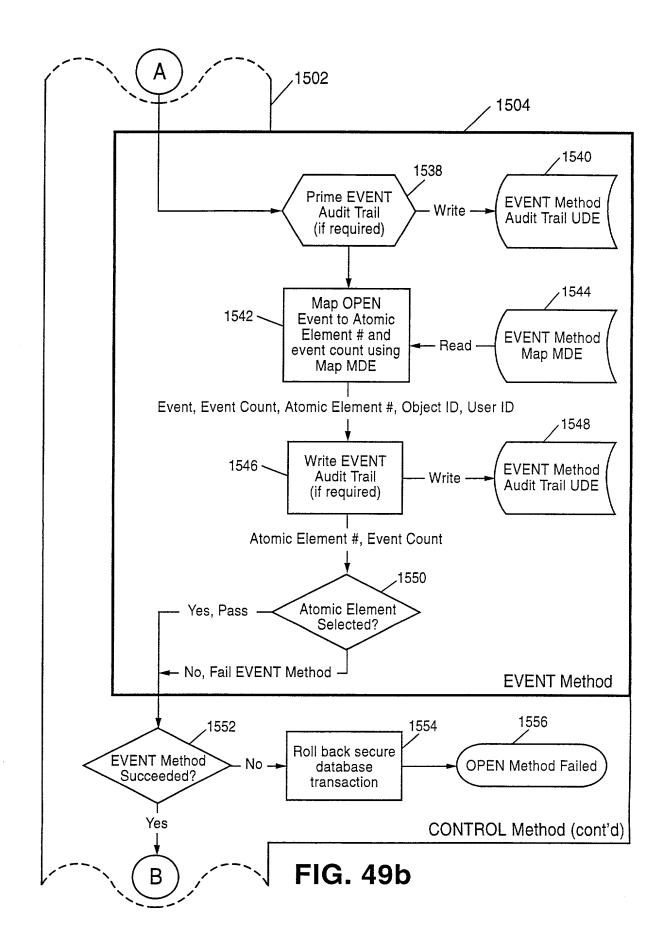


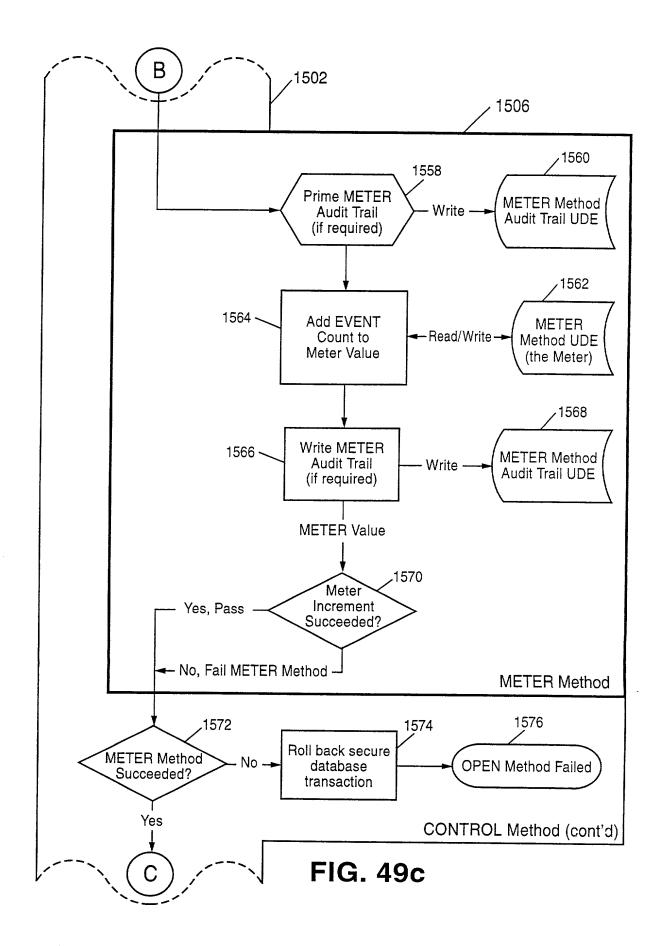


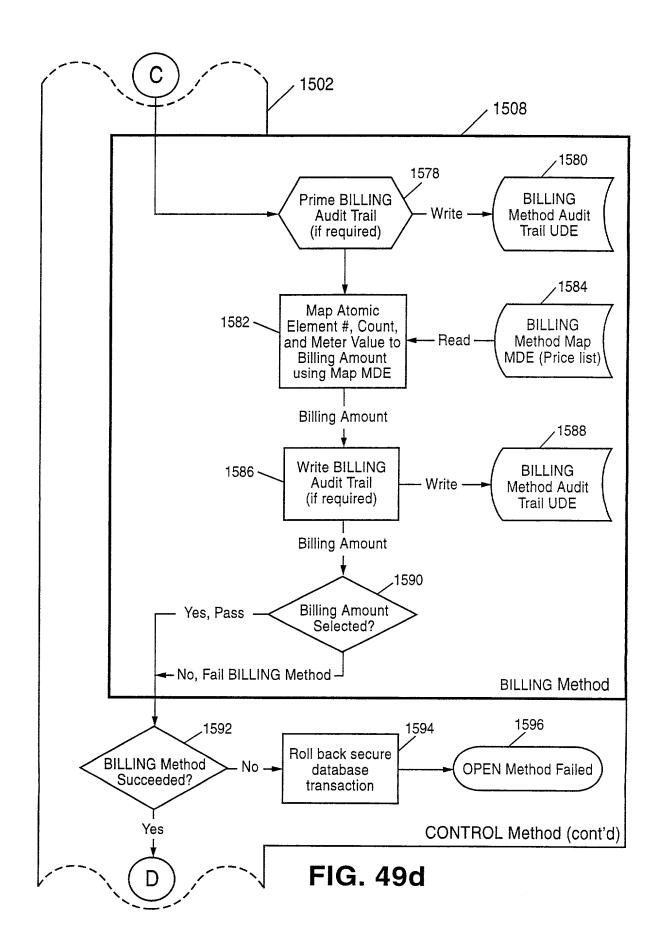


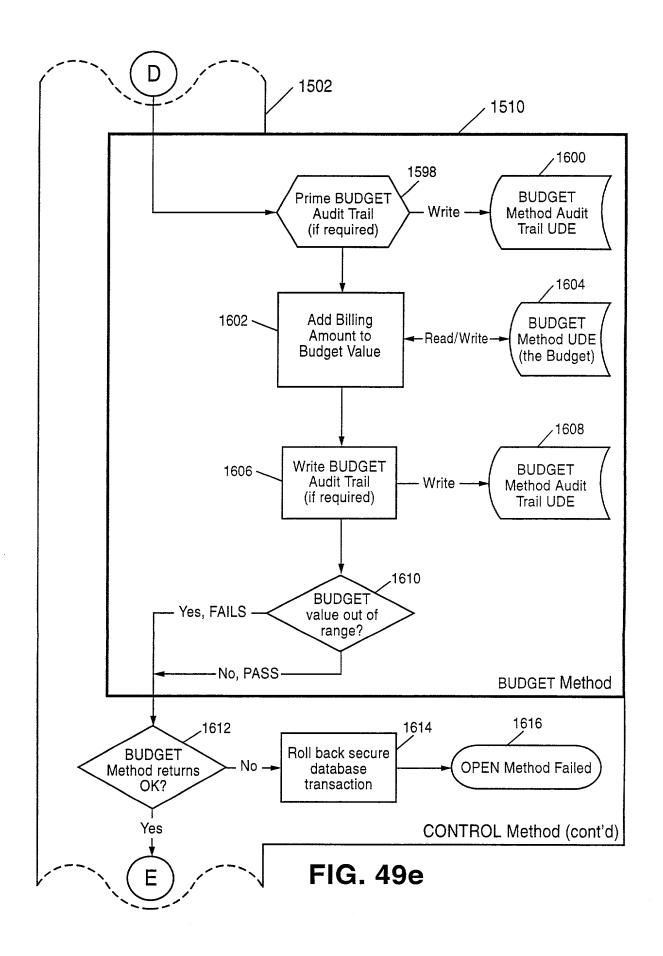


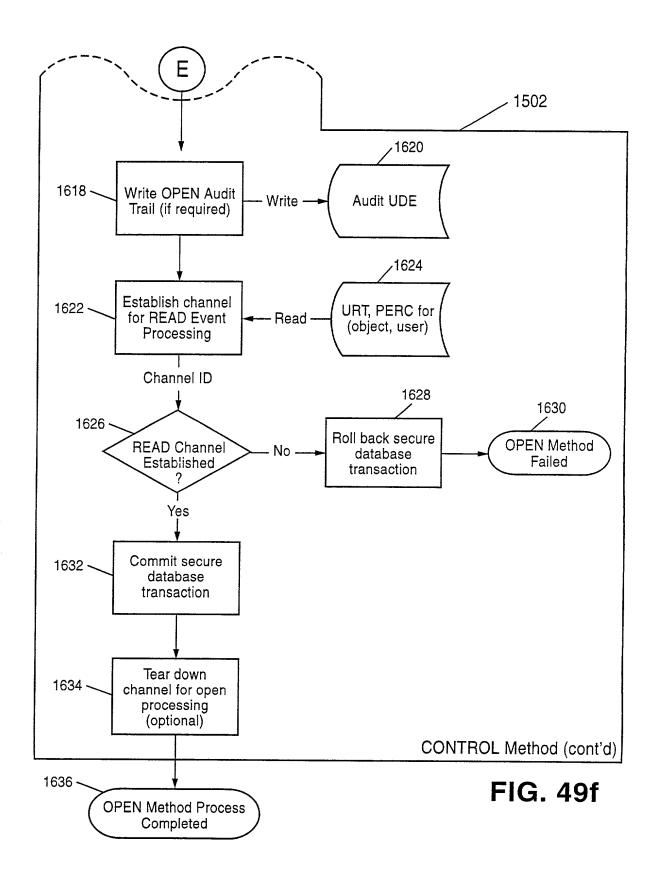


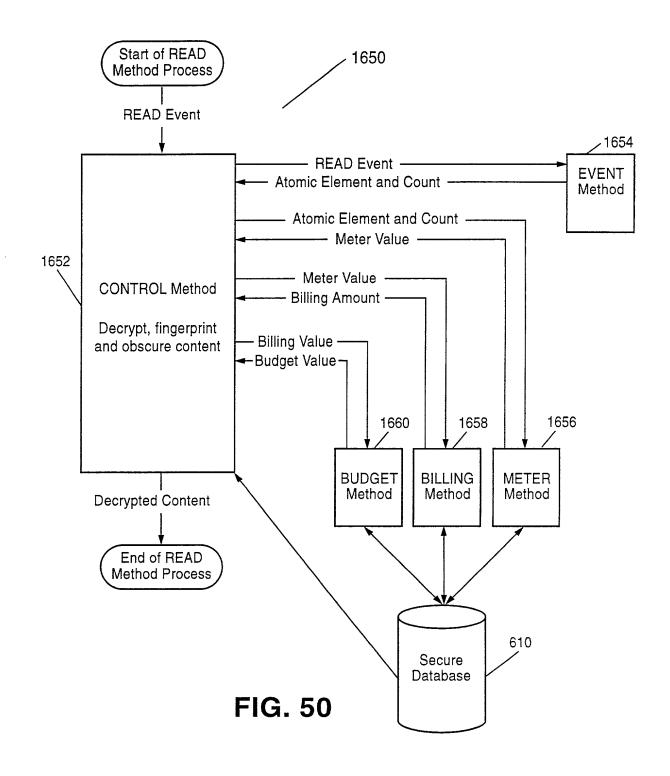


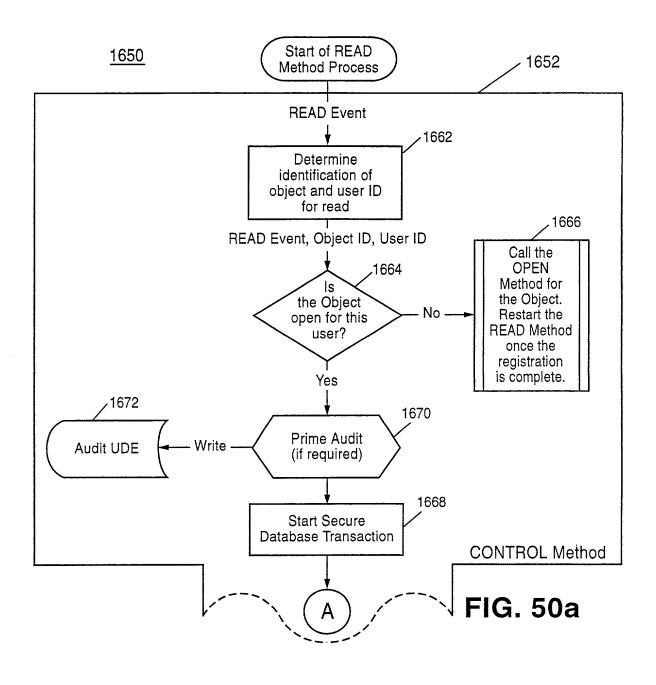


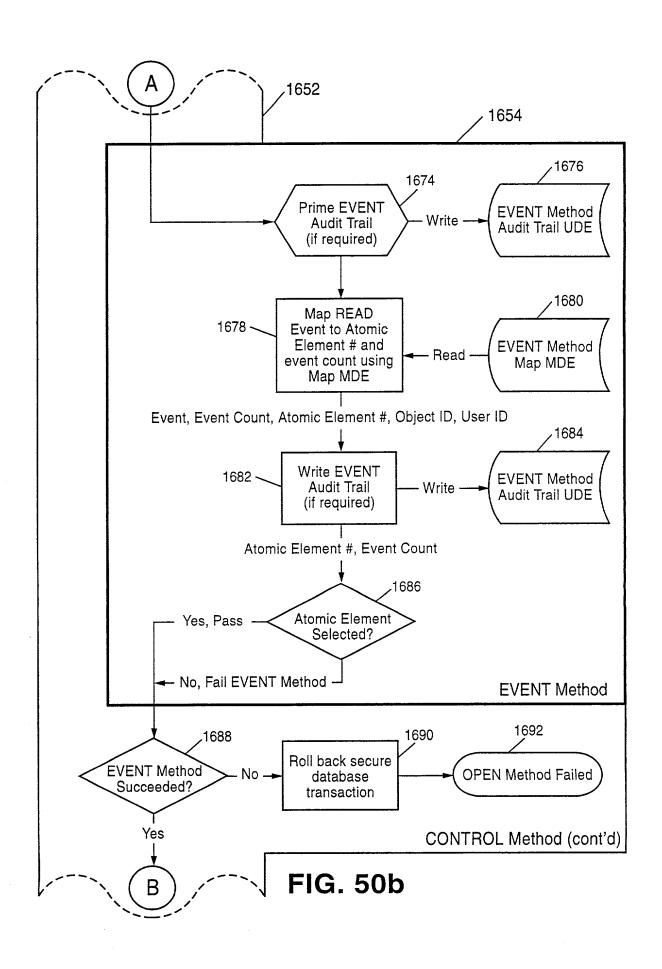


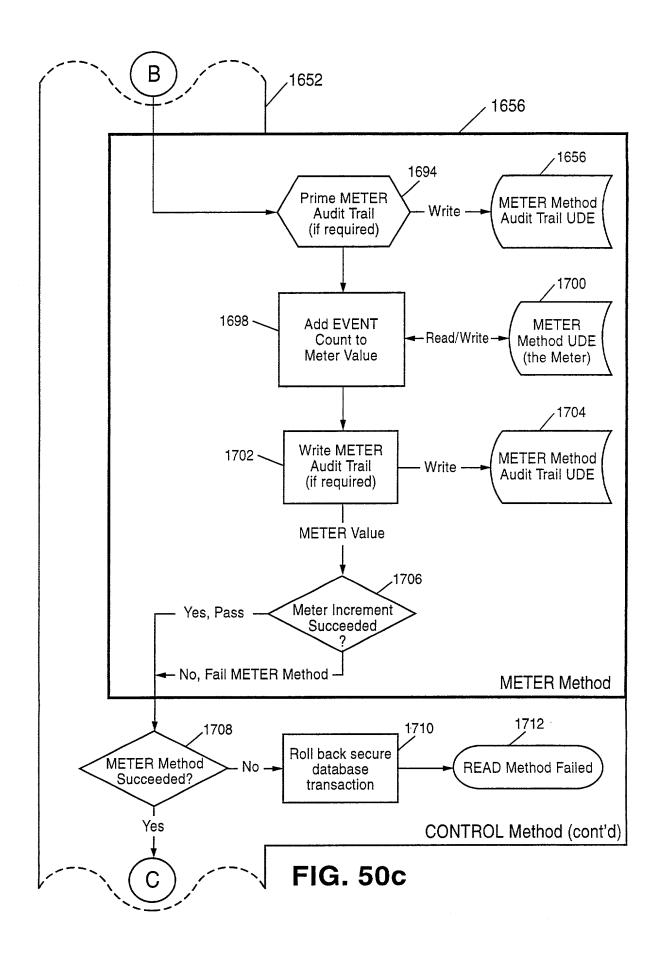


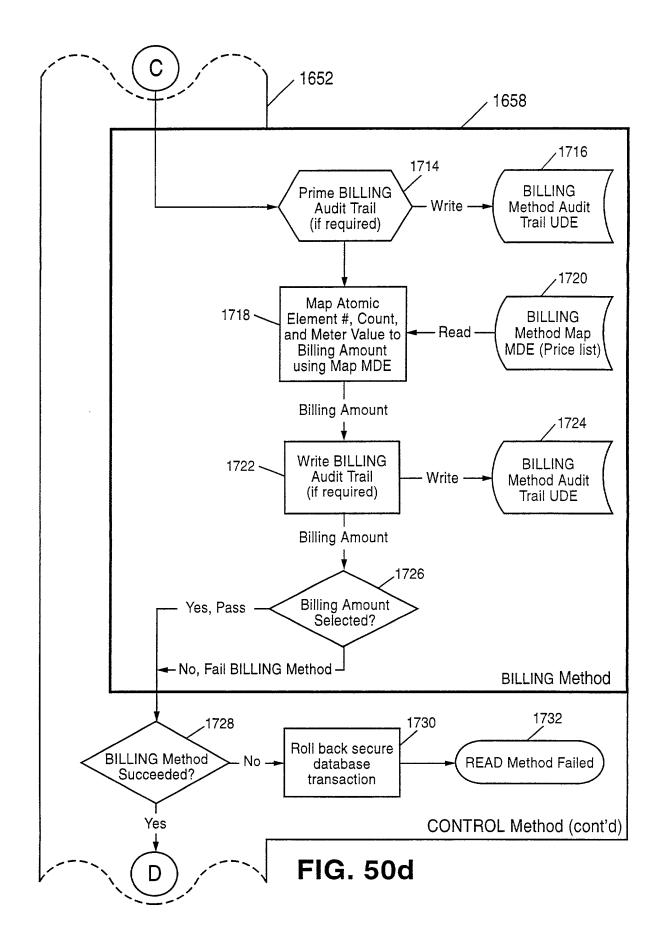


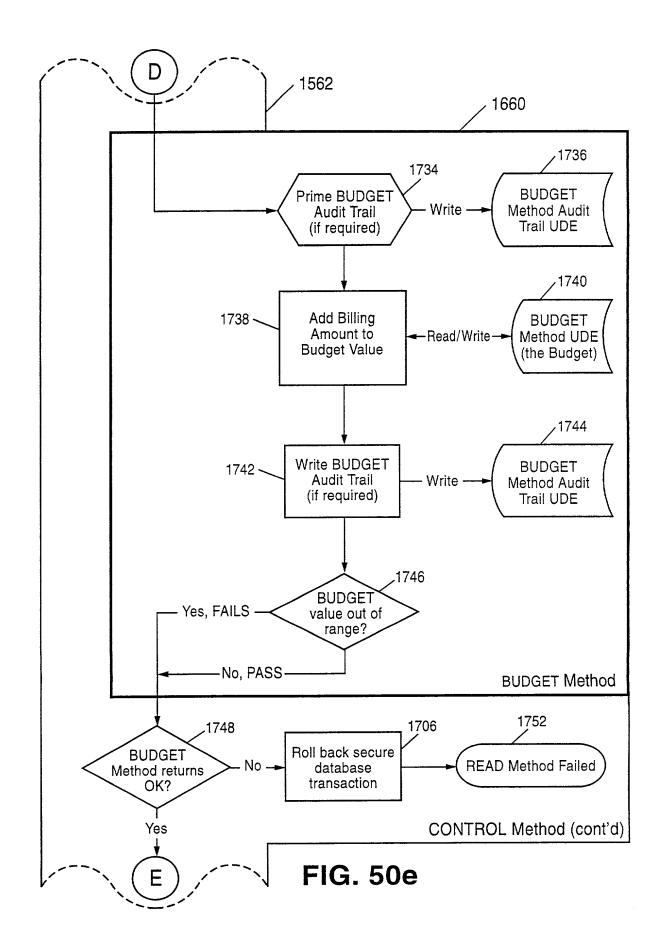


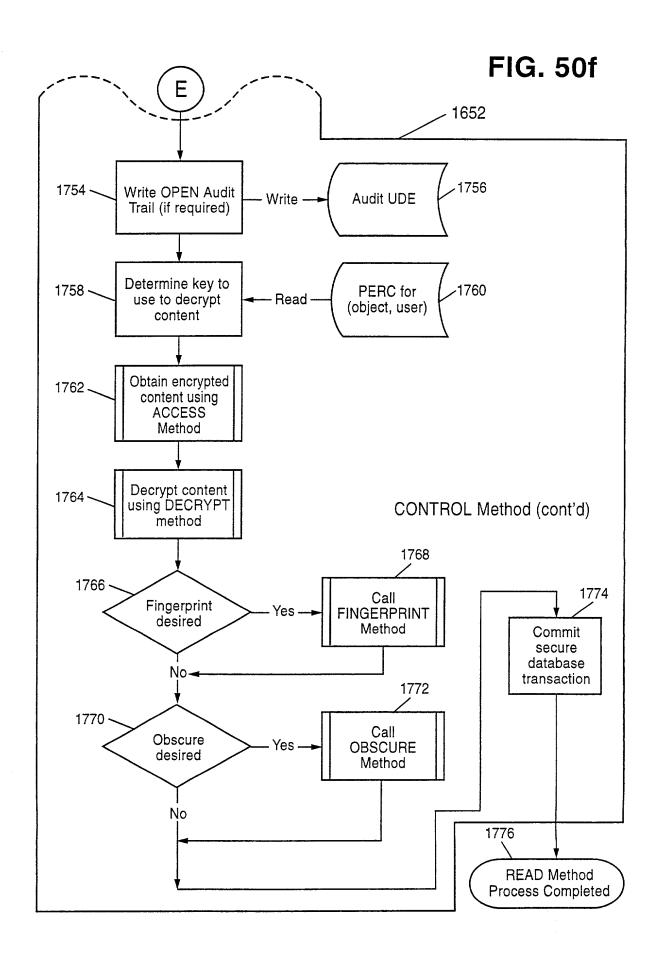


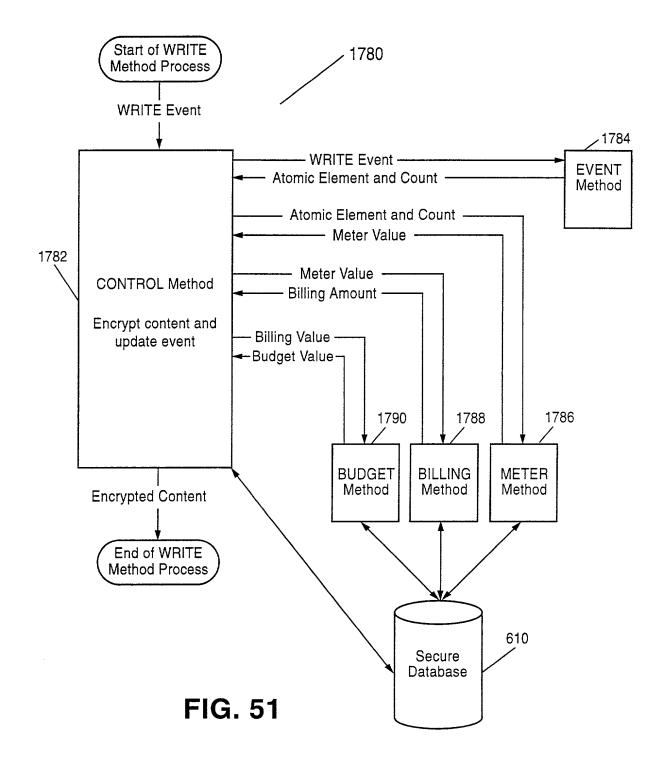


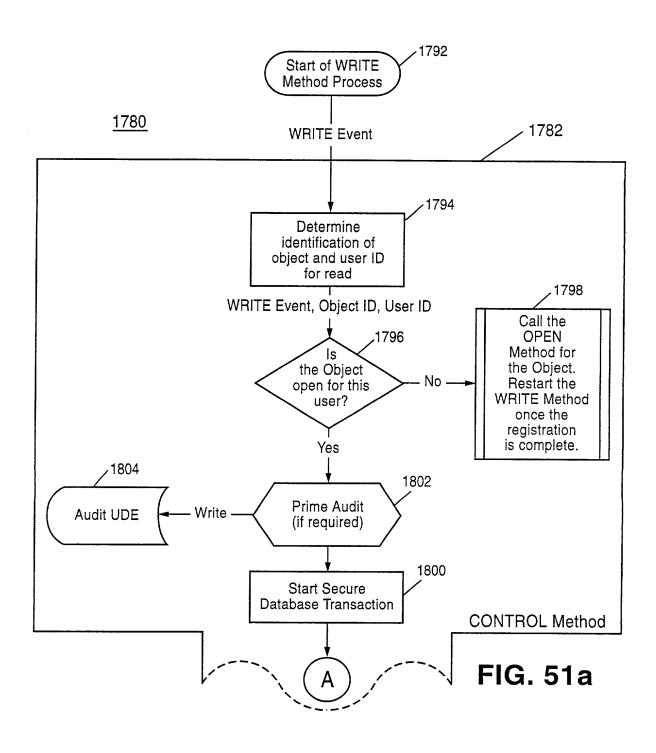


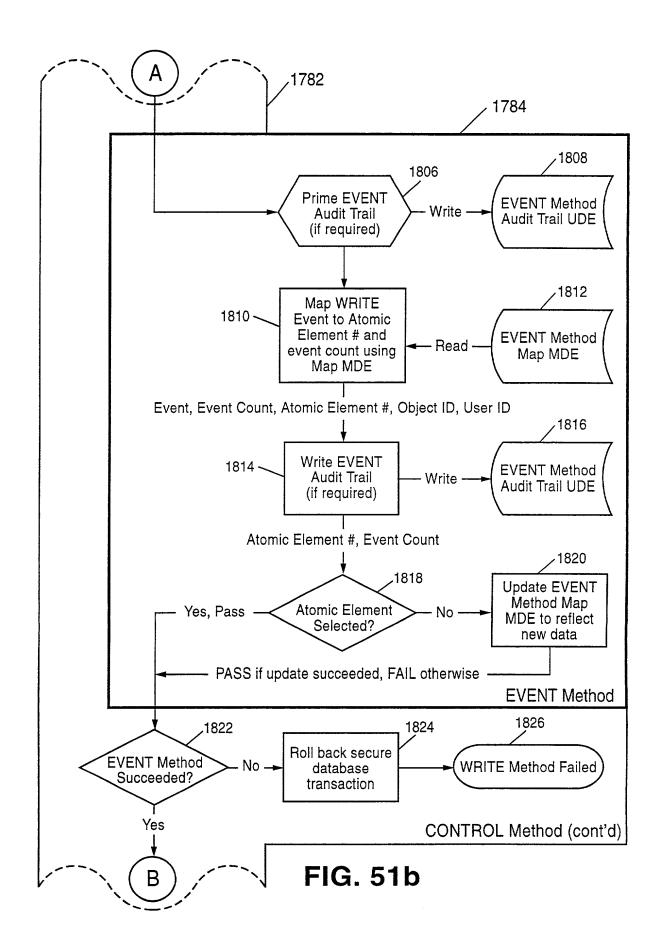


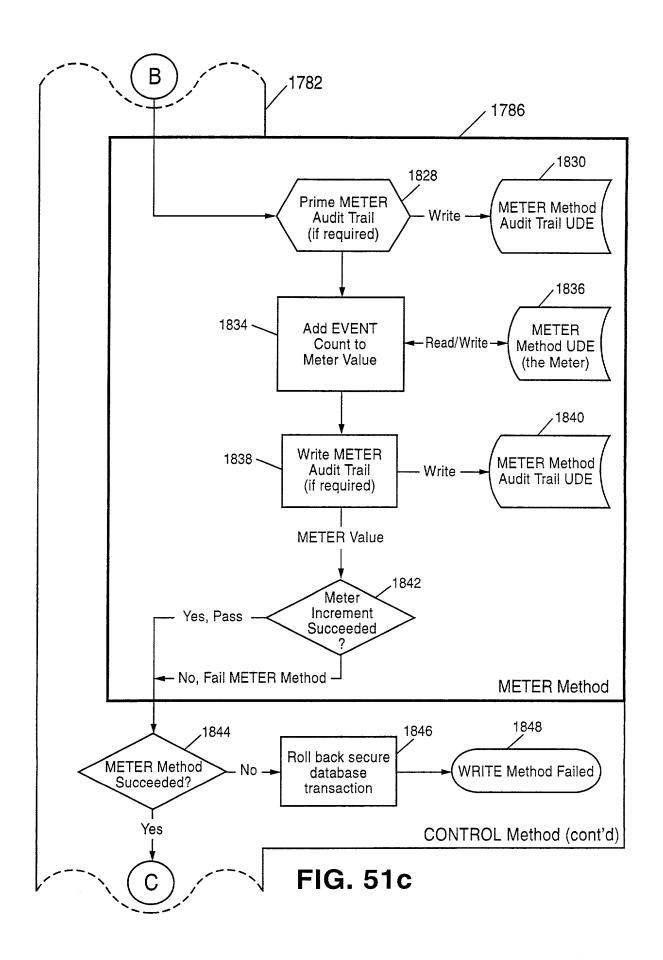


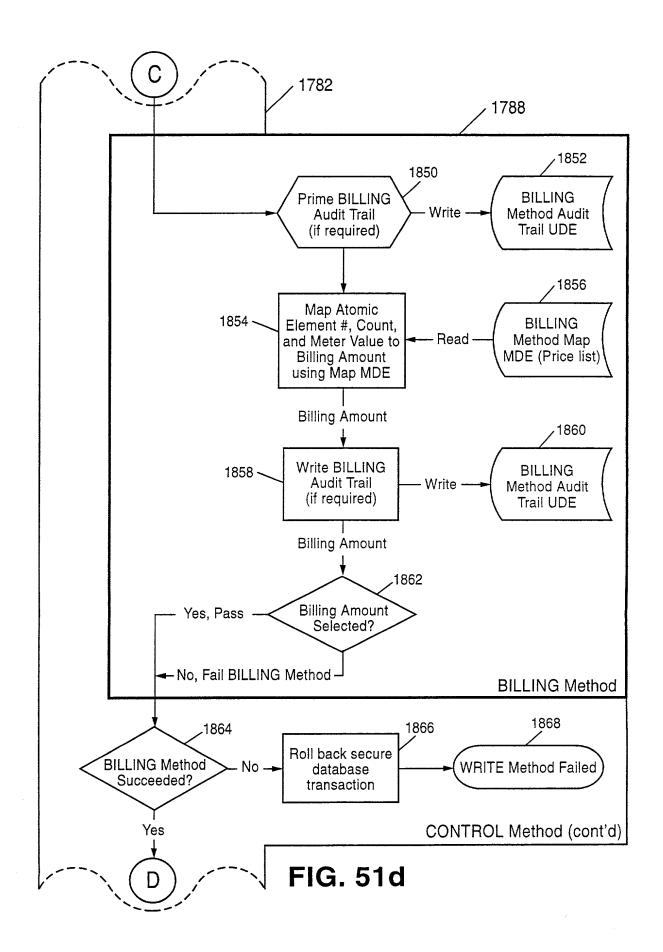


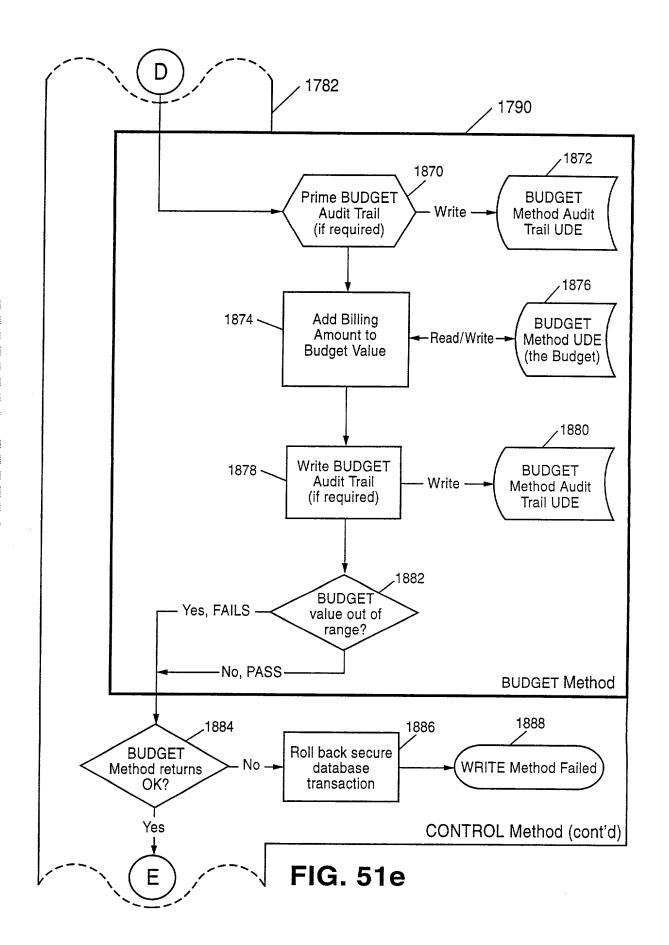


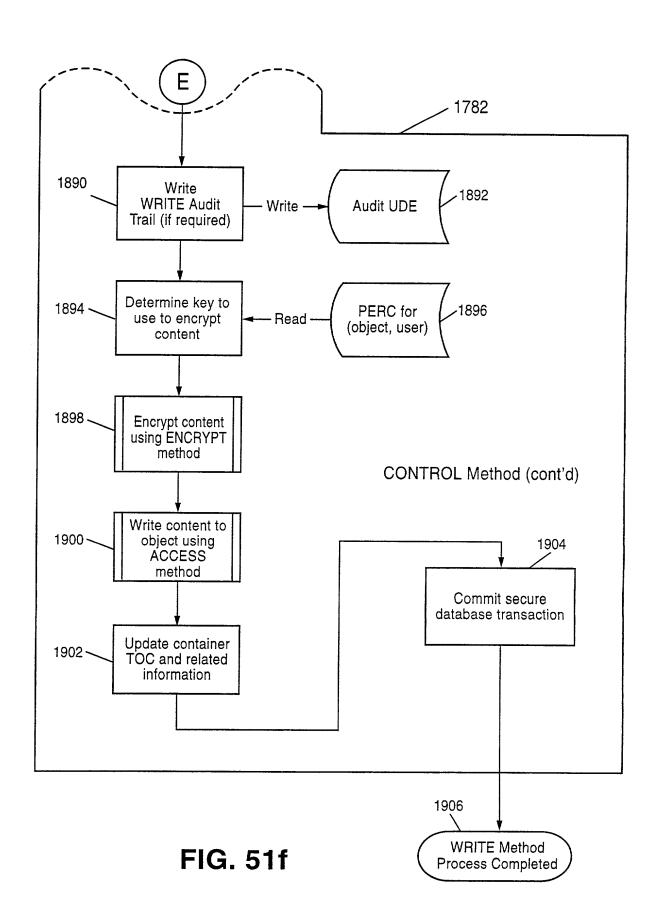


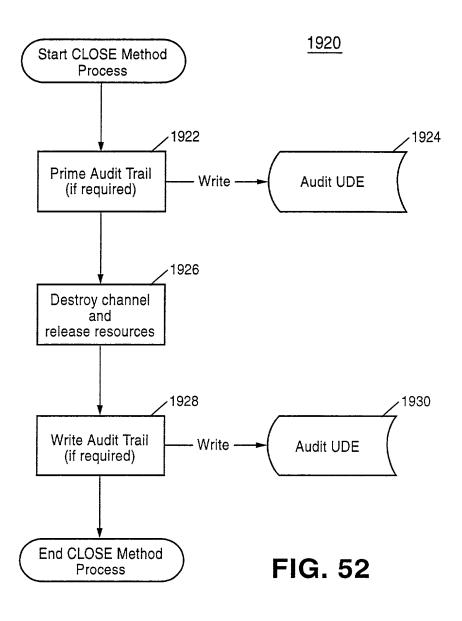


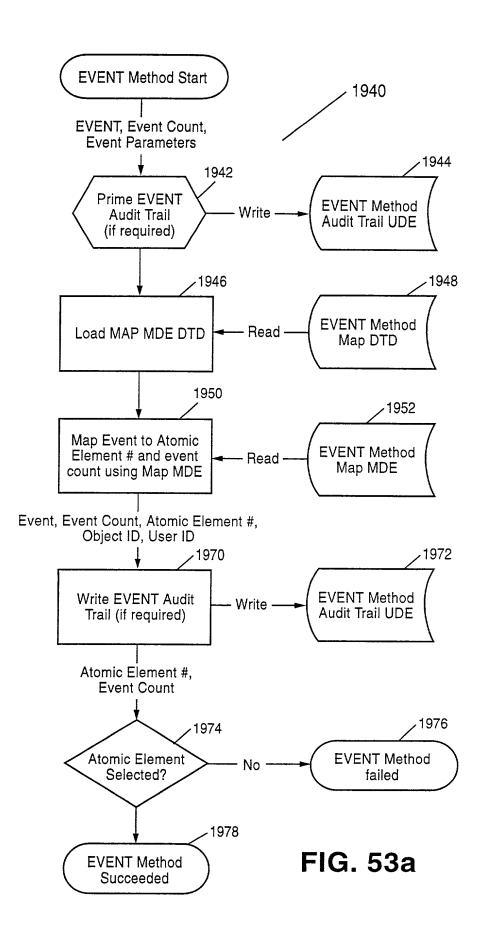


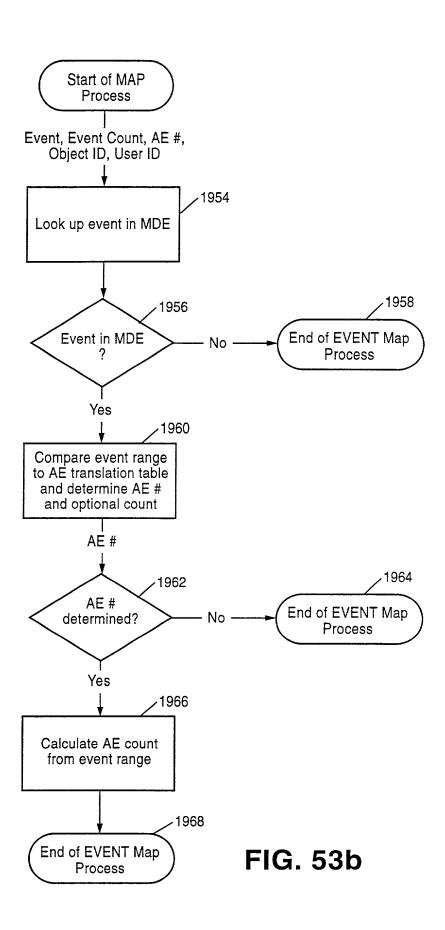


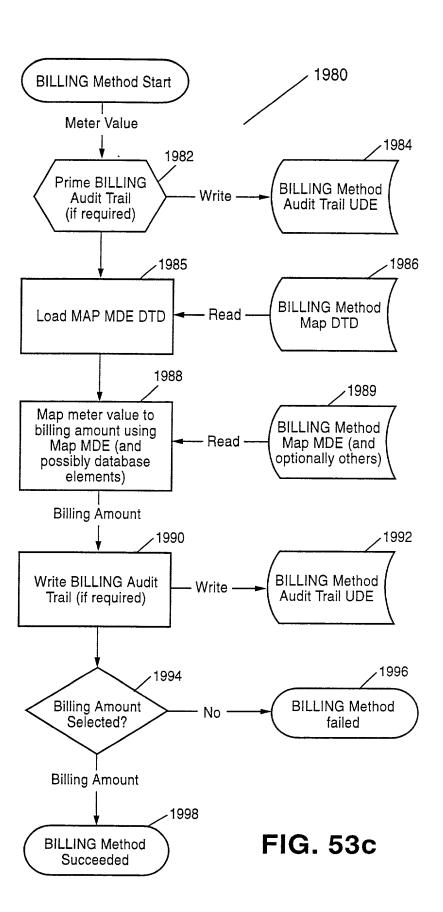


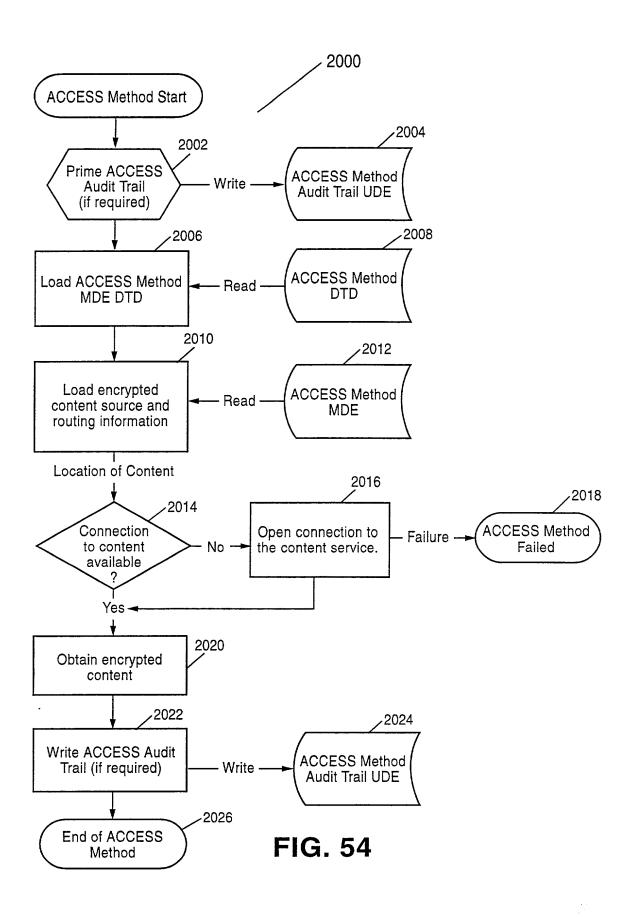


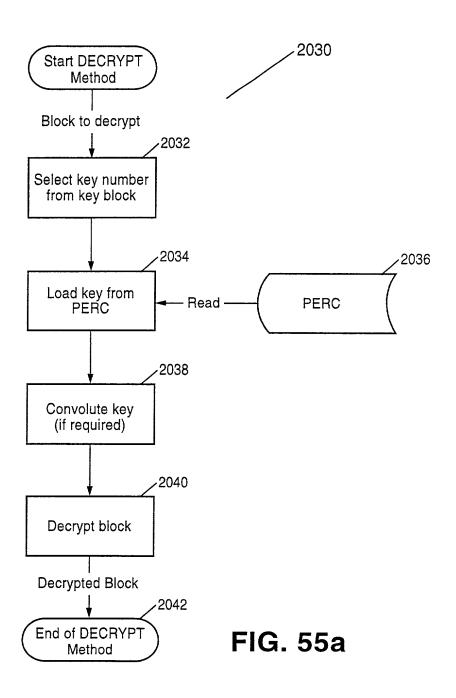


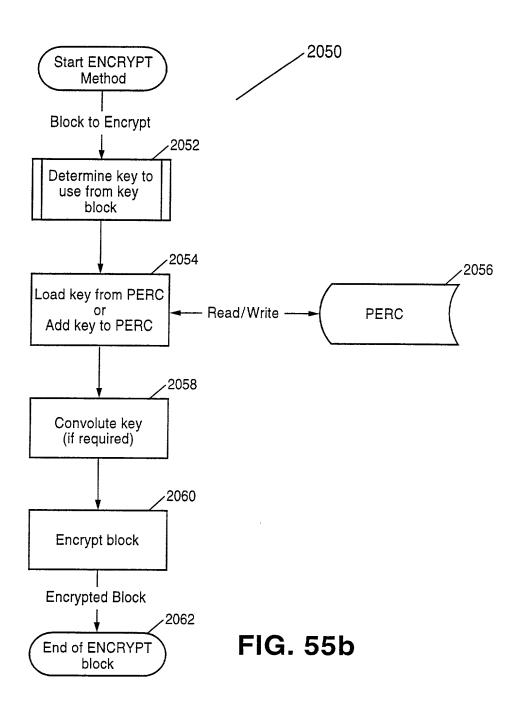


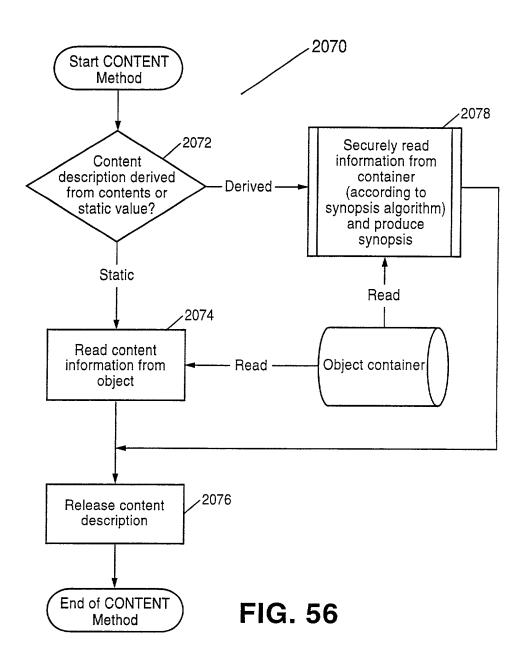


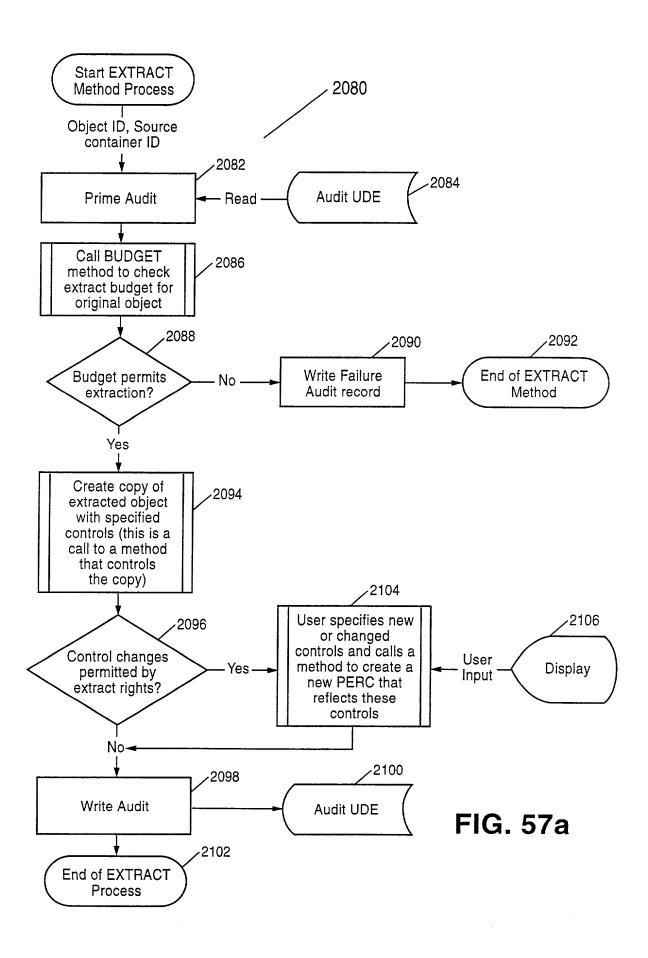


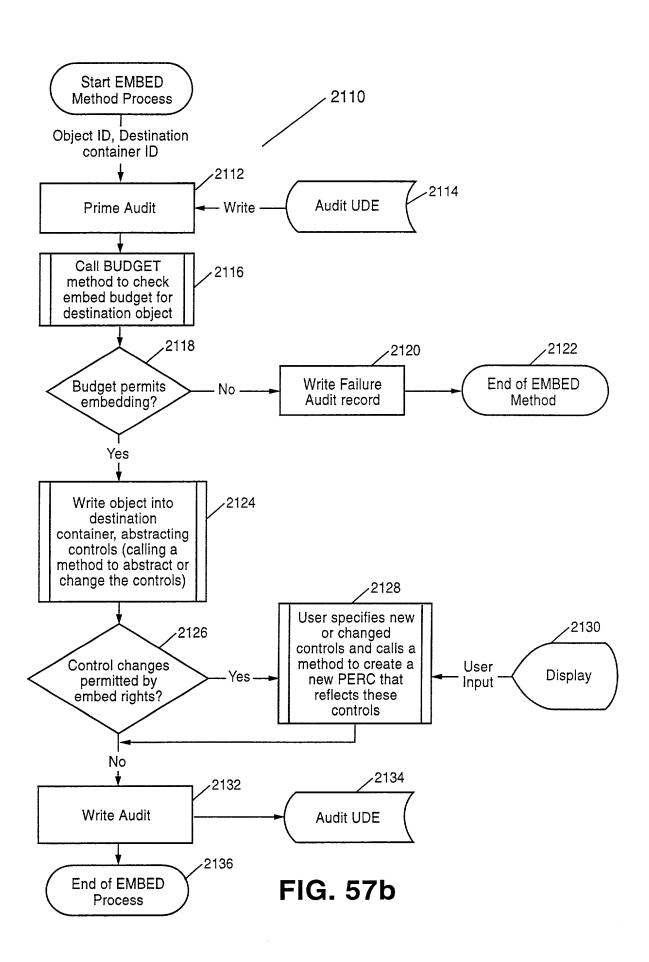


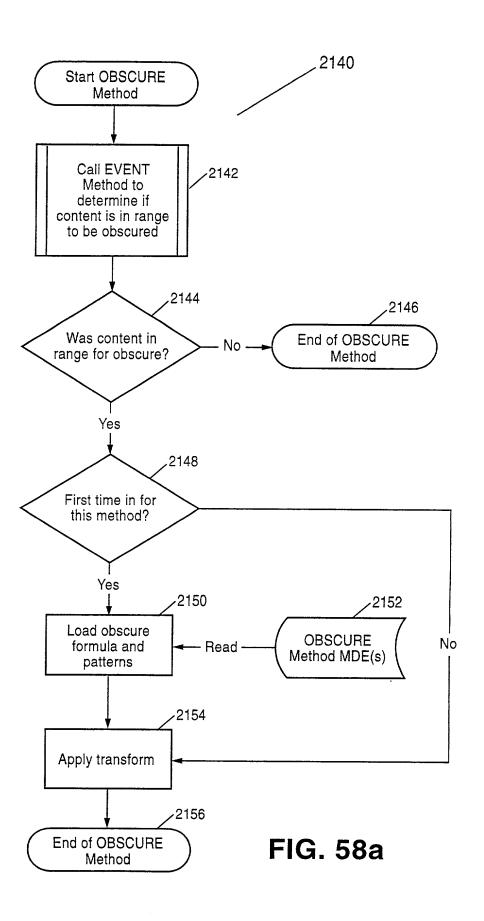


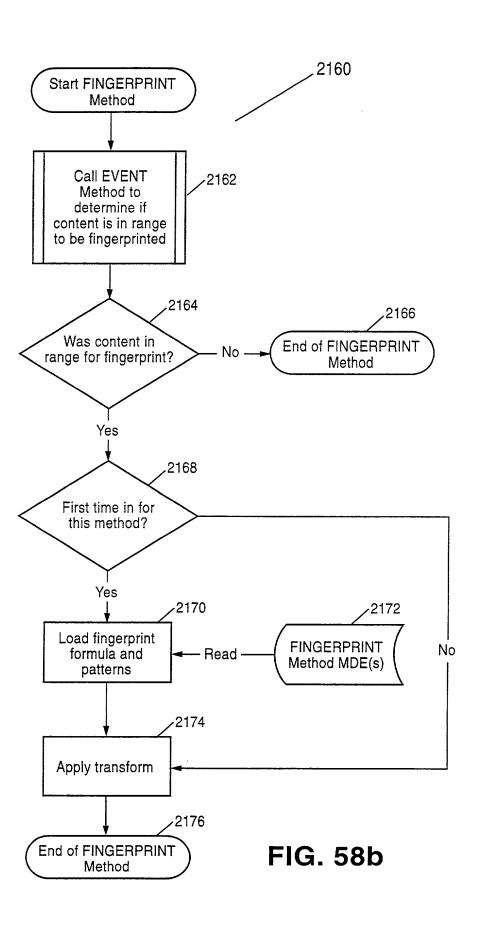












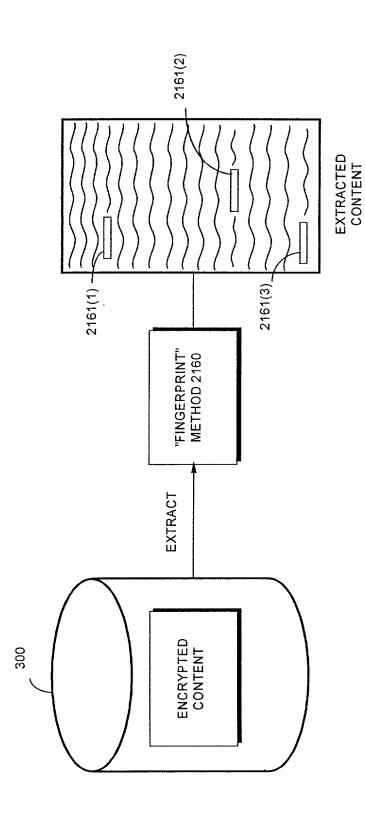
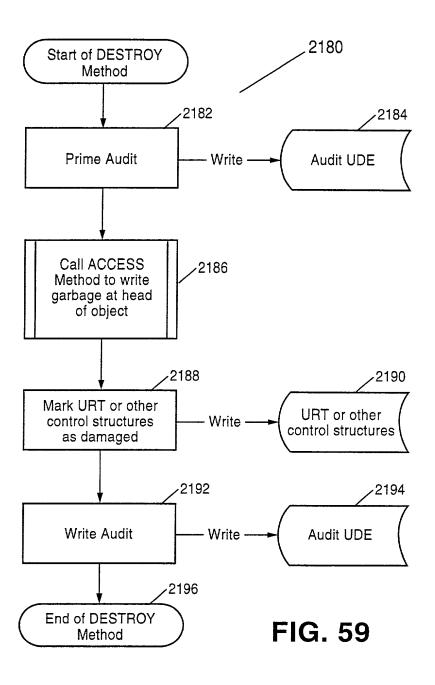
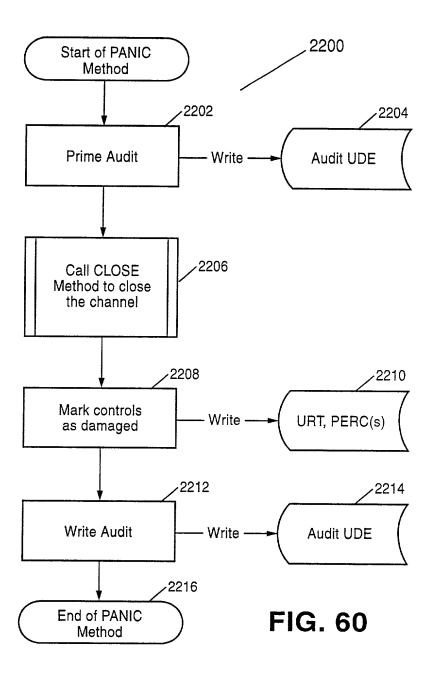


FIG. 58C





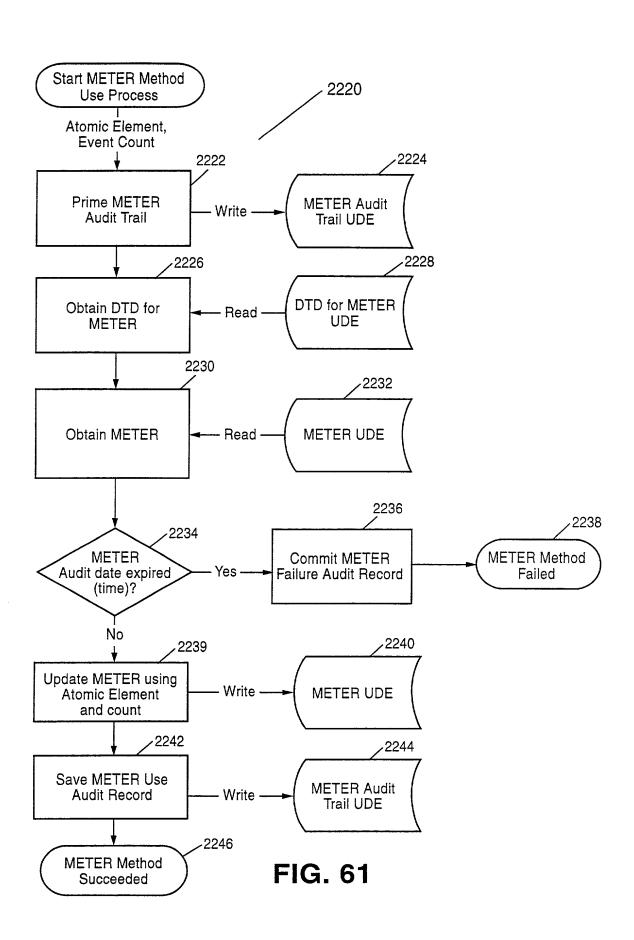
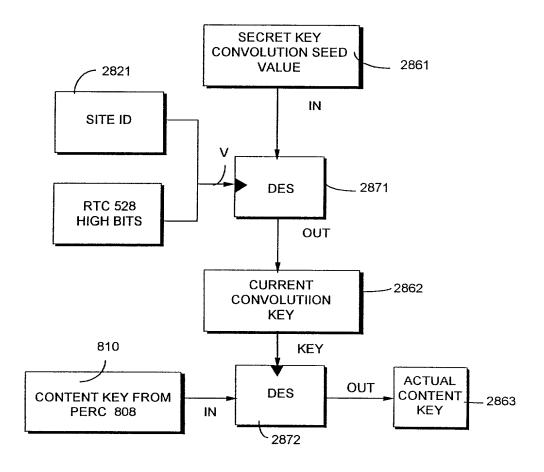
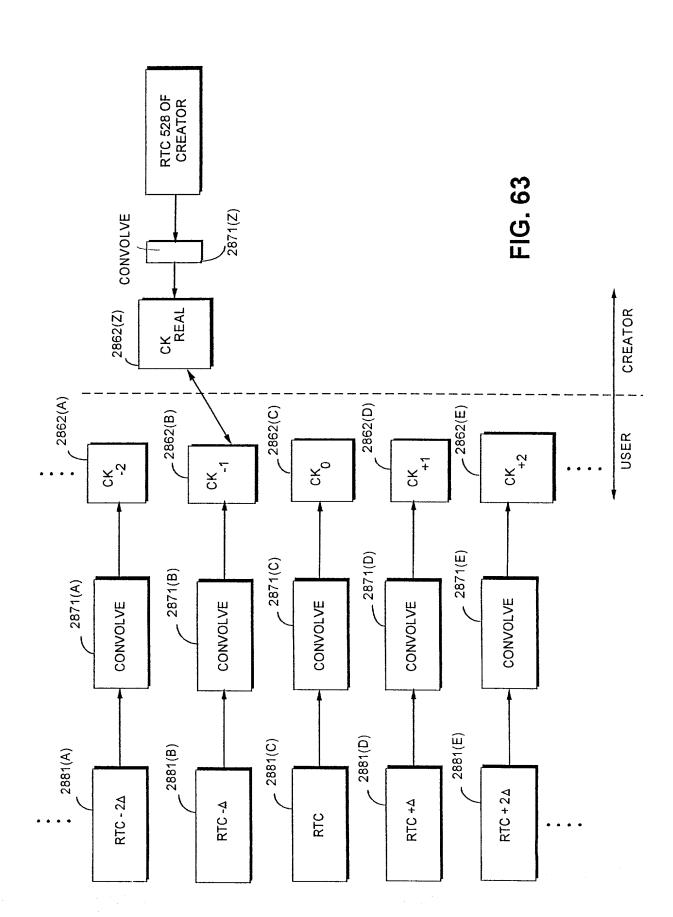
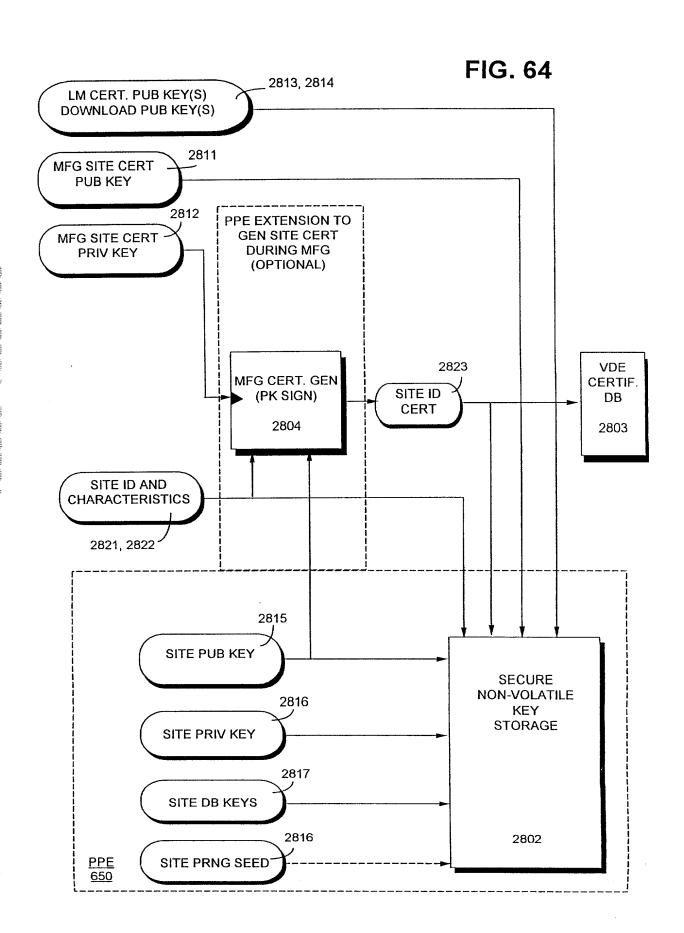
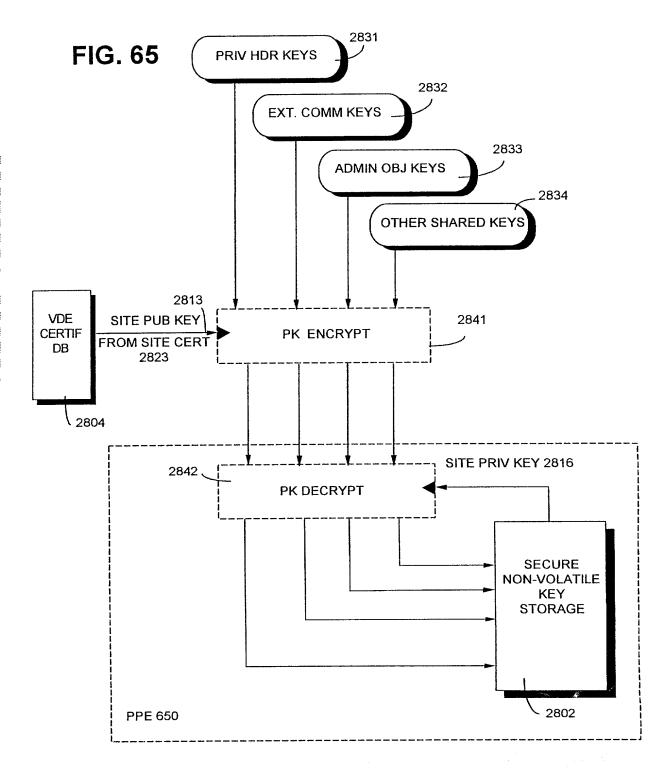


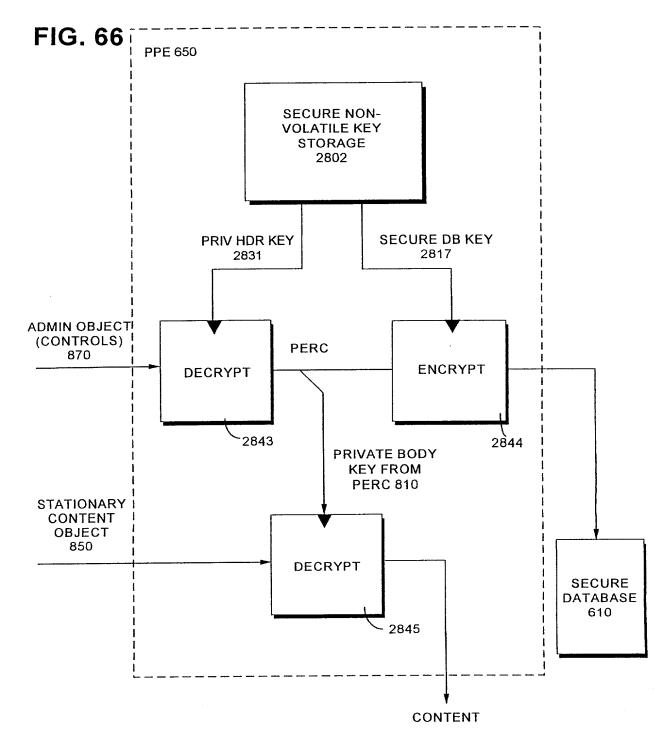
FIG. 62

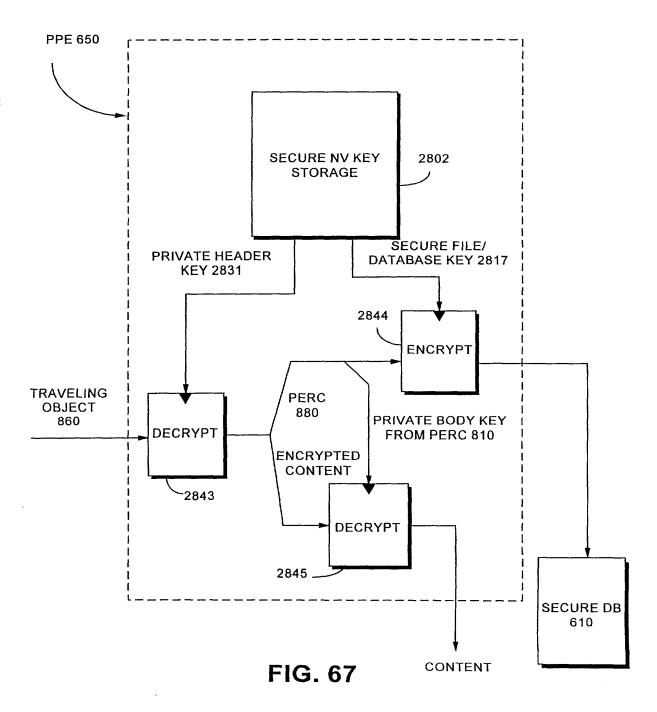


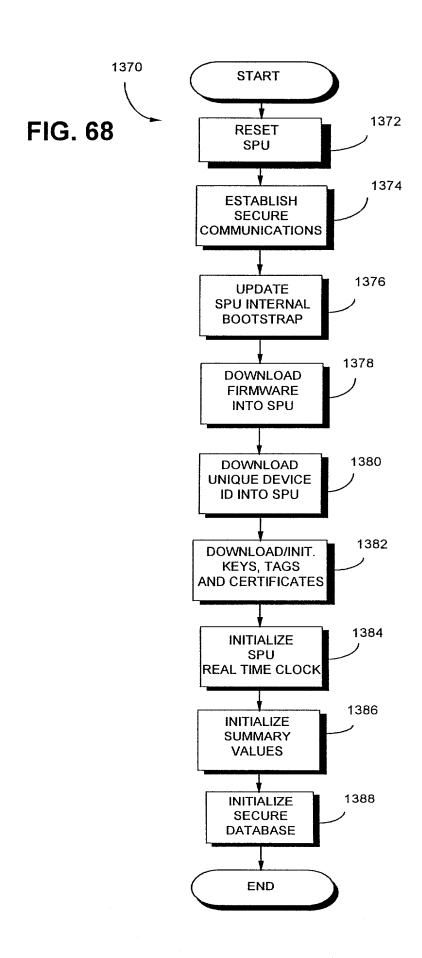


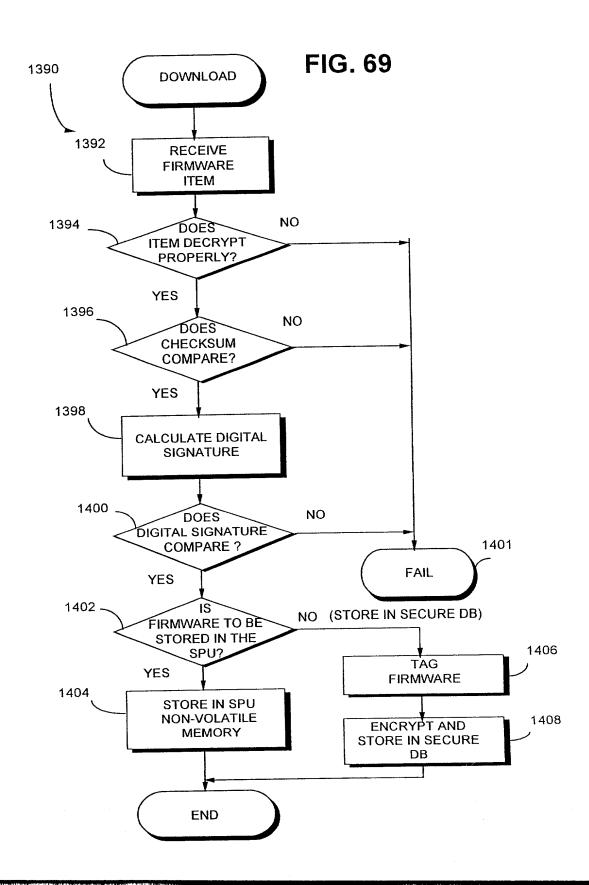


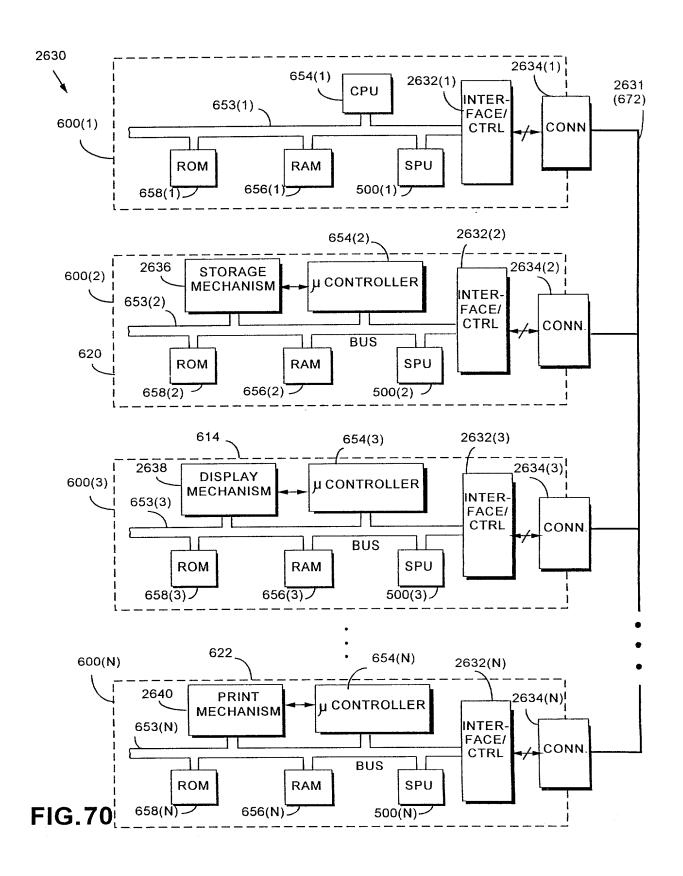


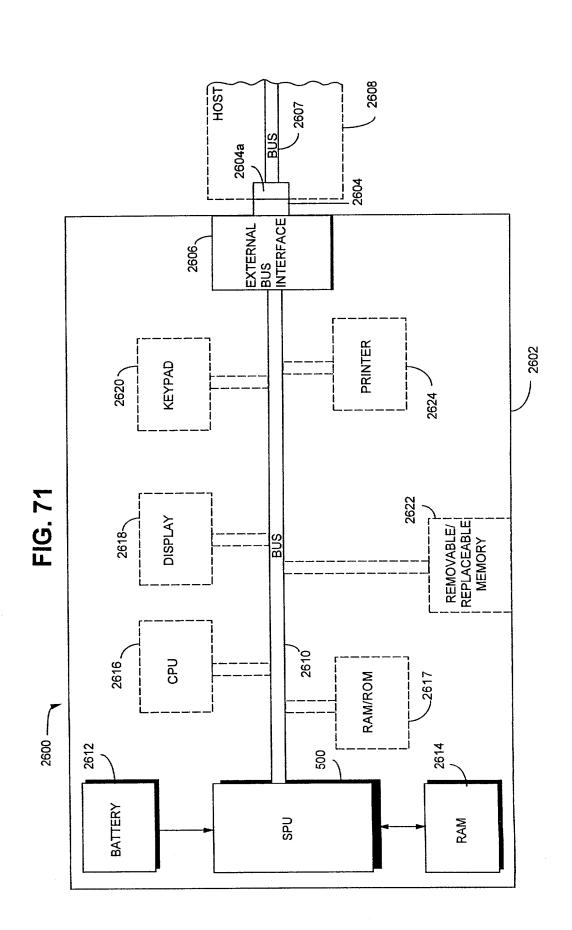












LOG IN USER INTERFACE 18			2
USER NAME:	SHEAR, V.		LOGIN
PASSWORD:	* * * * *		CANCEL
LOGIN AT STARTUP		HELP	

FIG. 72A

FIG. 72B

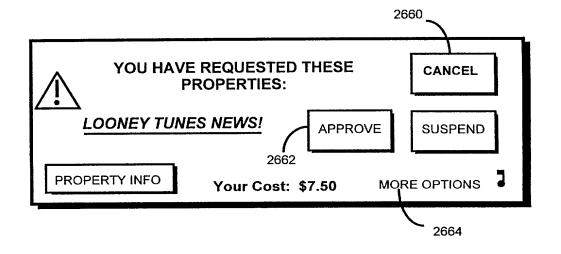


FIG. 72C

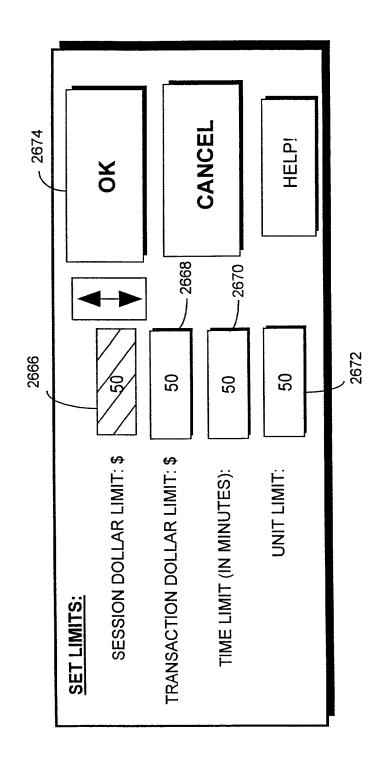
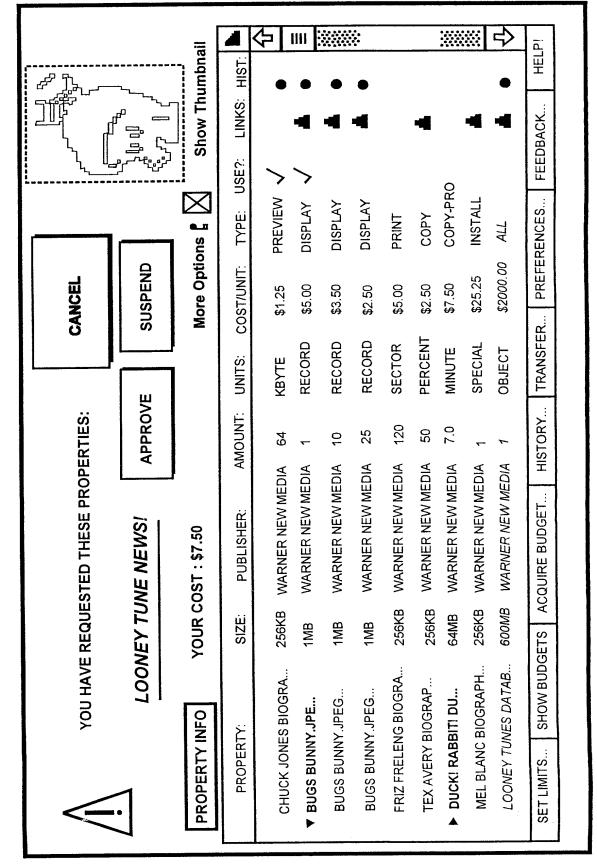
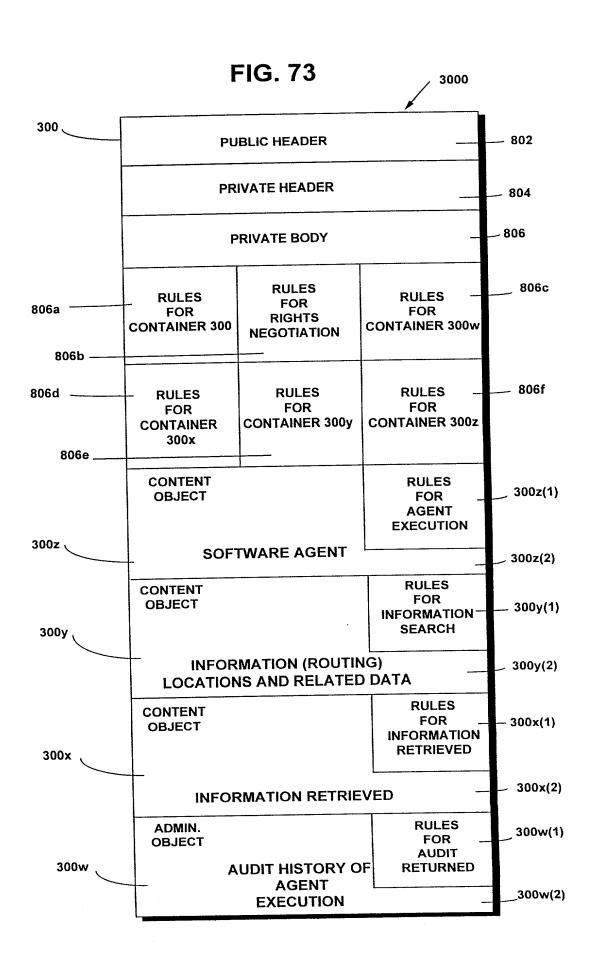
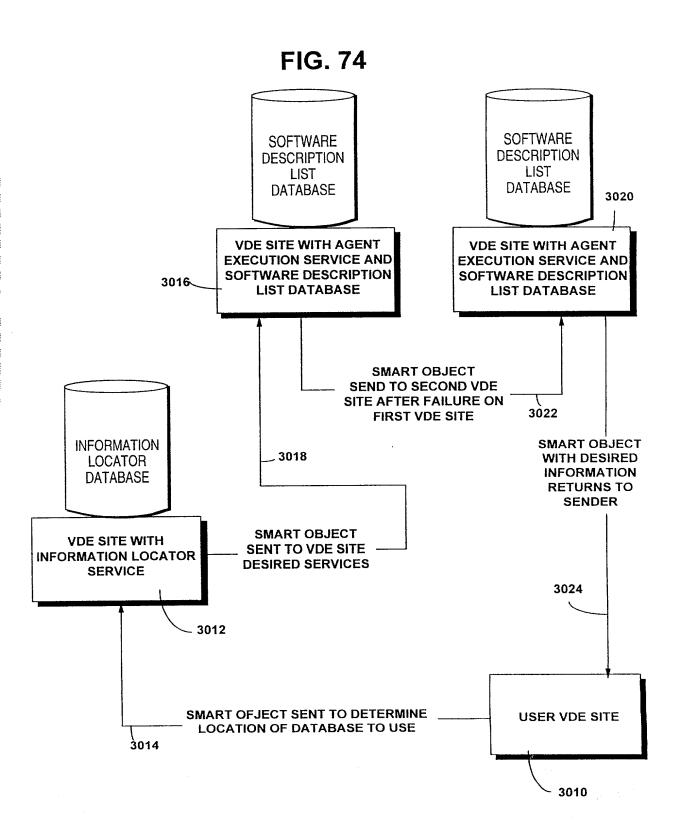


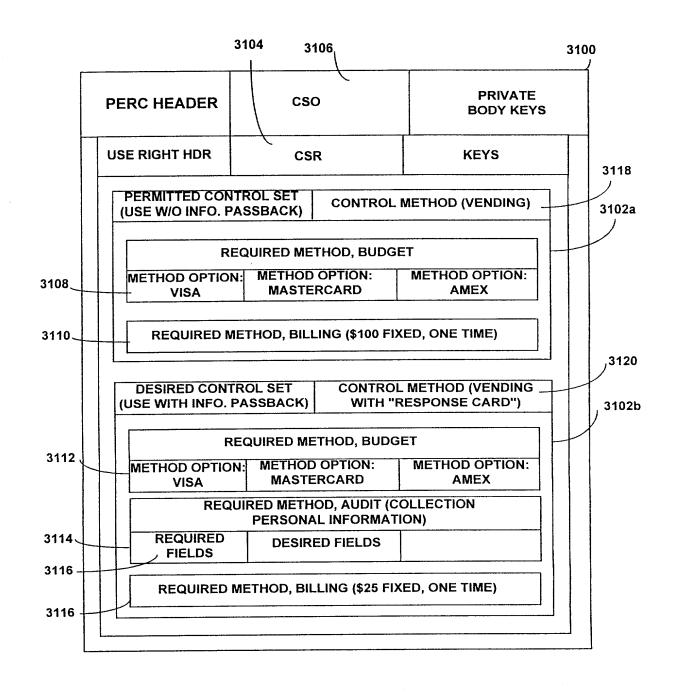
FIG. 72D







## **FIG. 75A**



## FIG. 75B

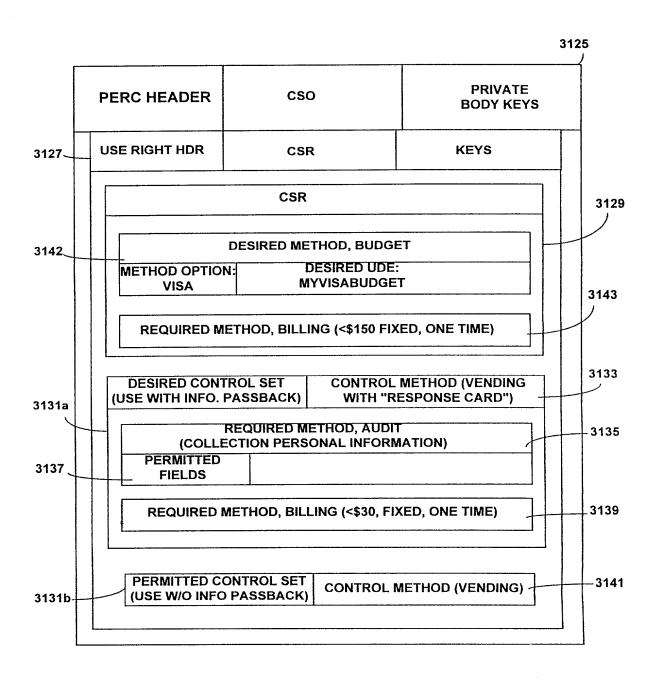


FIG. 75C

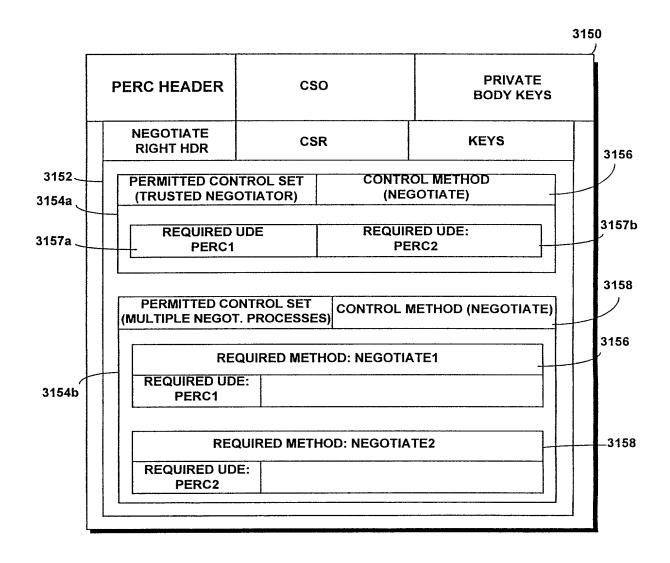
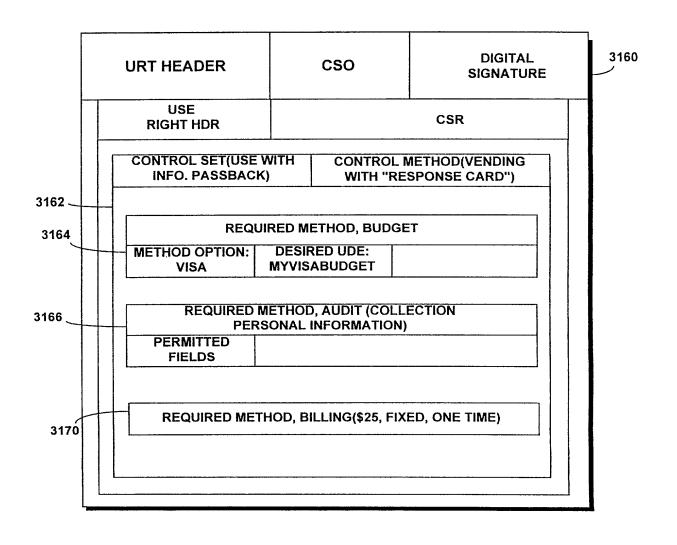
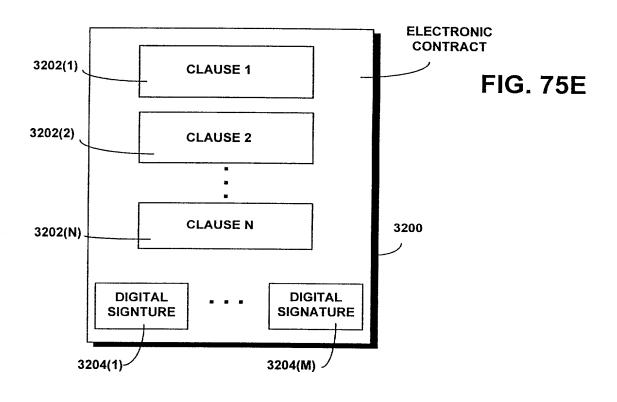
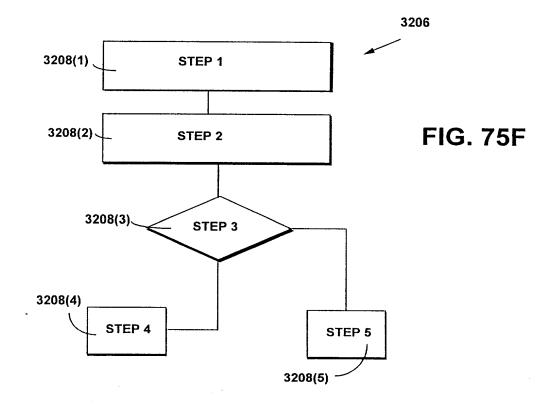


FIG. 75D







**FIG. 76A** 

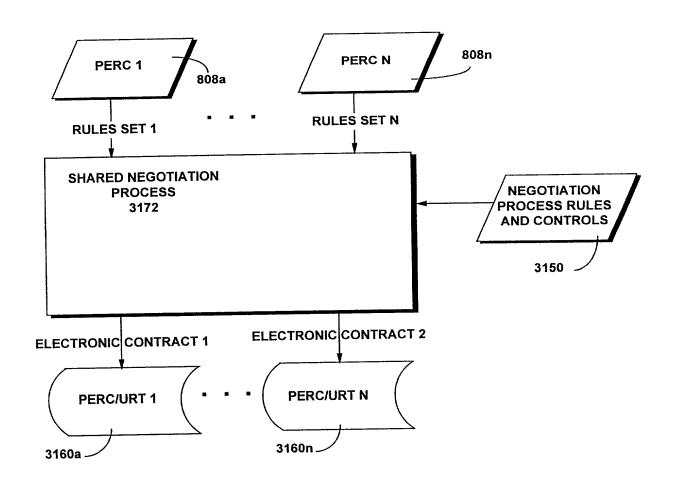
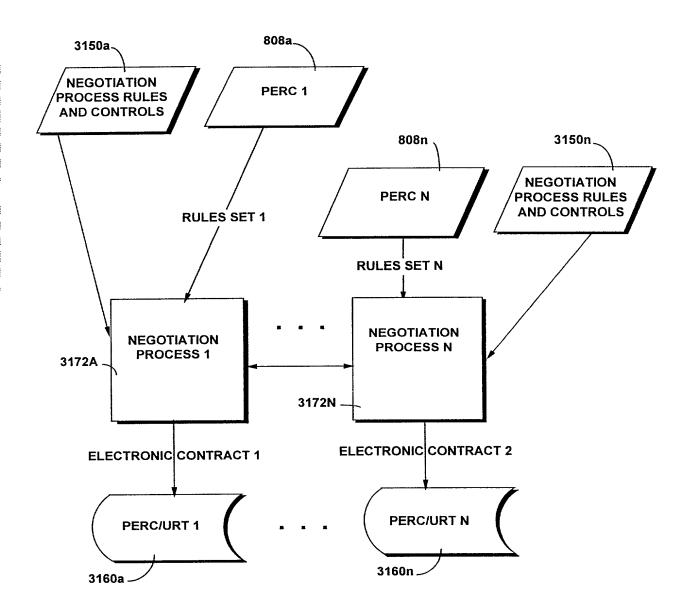
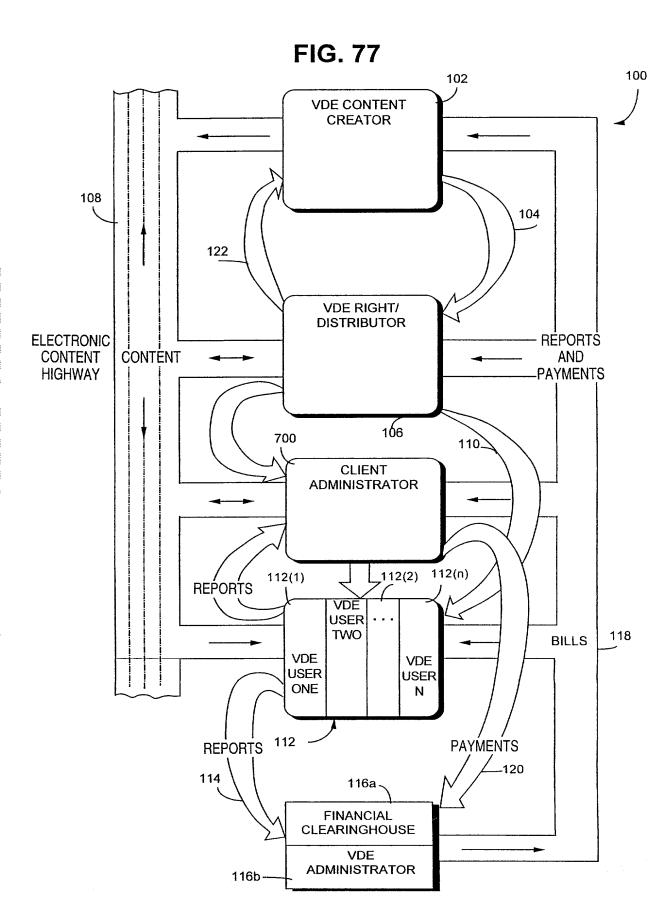


FIG. 76B





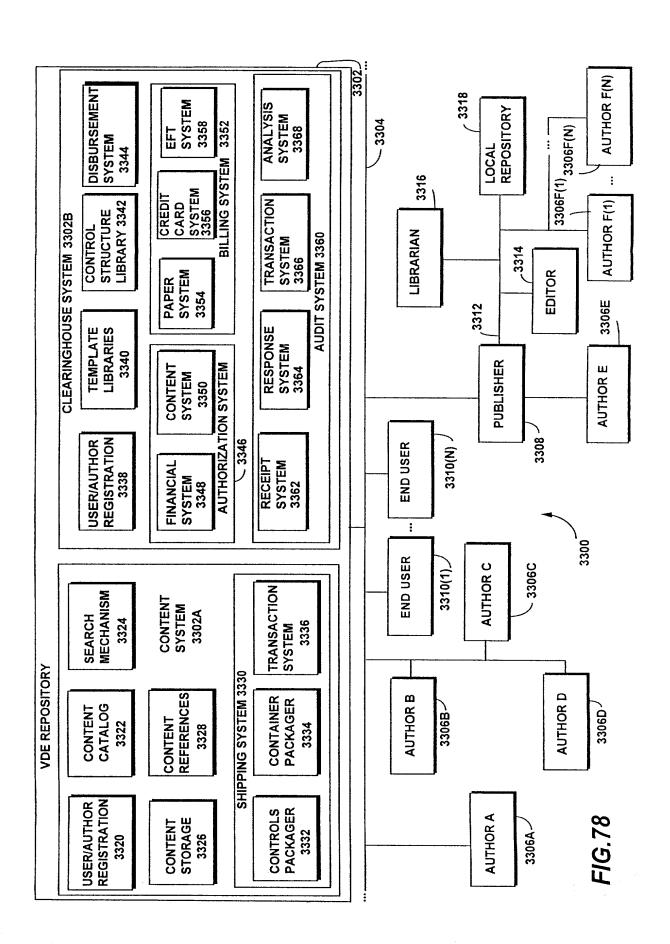
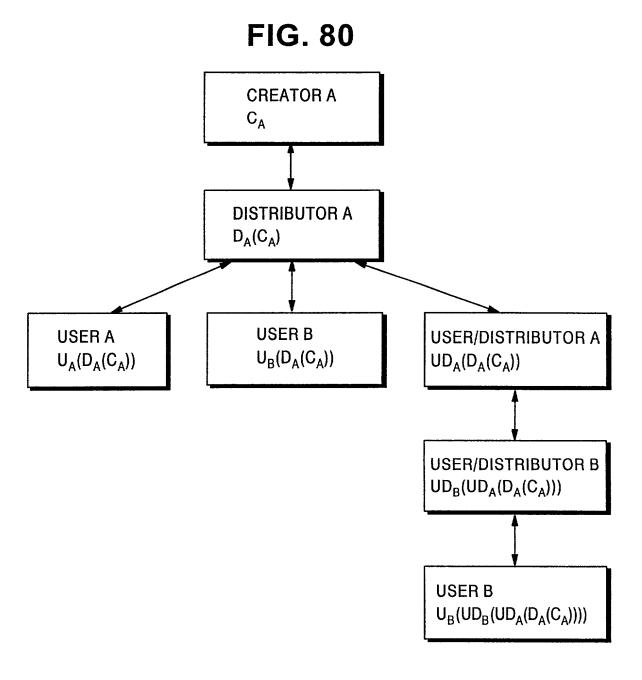
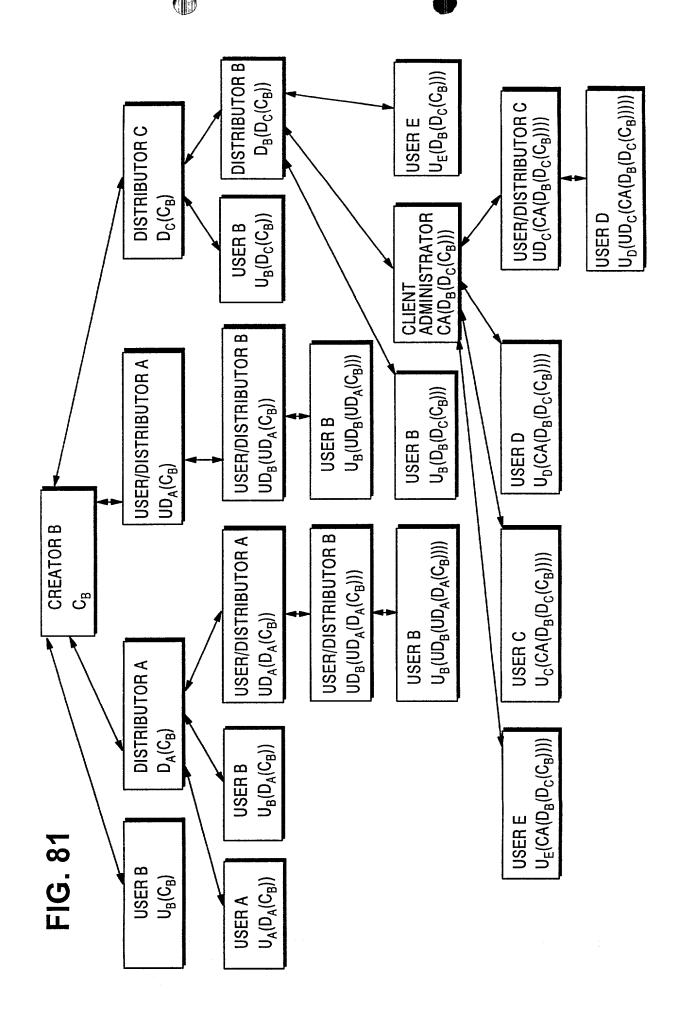
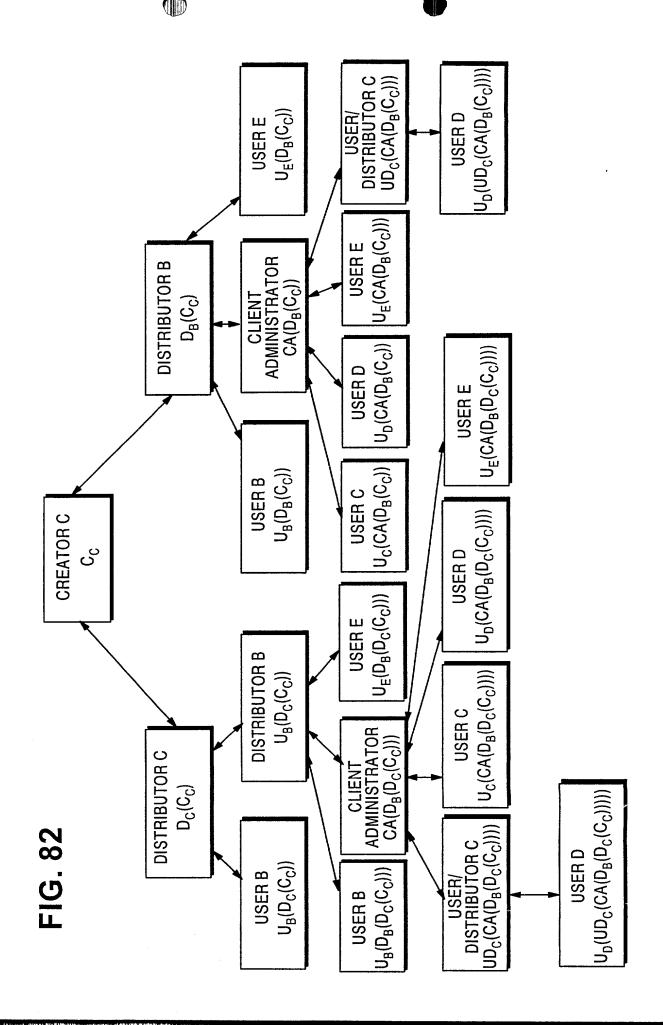


FIG. 79 **CREATOR B CREATOR A CREATOR C** DISTRIBUTOR C CREATOR D CREATOR **DISTRIBUTOR B DISTRIBUTOR A** Ε **CLIENT** USER/ **ADMINISTRATOR DISTRIBUTOR A** USER/ USER/ **USER A USER C USER E** DISTRIBUTOR DISTRIBUTOR B **USER D USER B** 







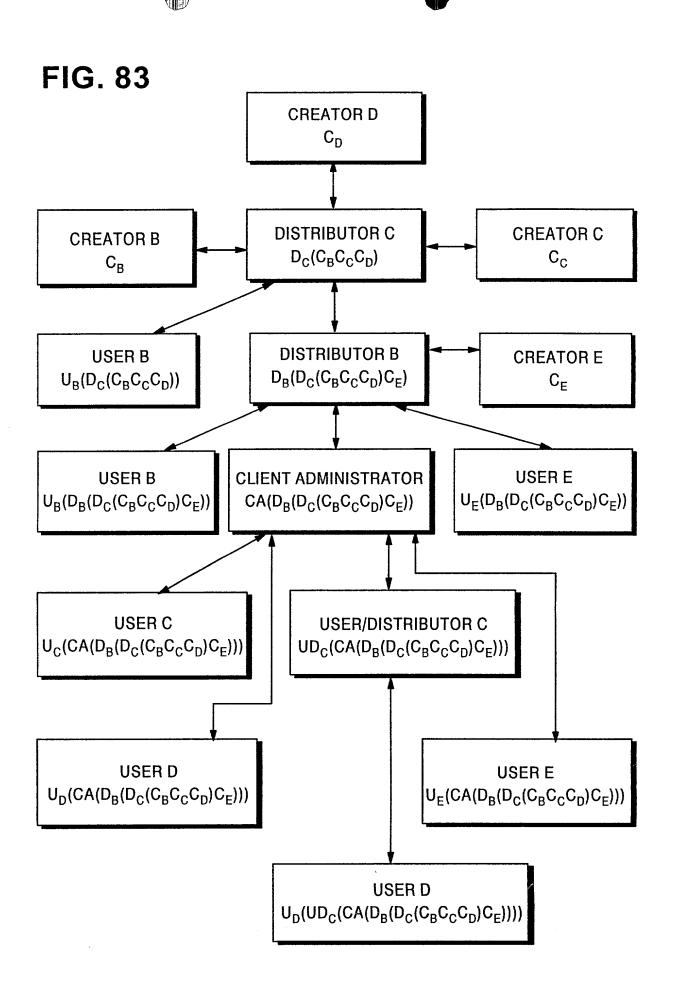


FIG. 84

